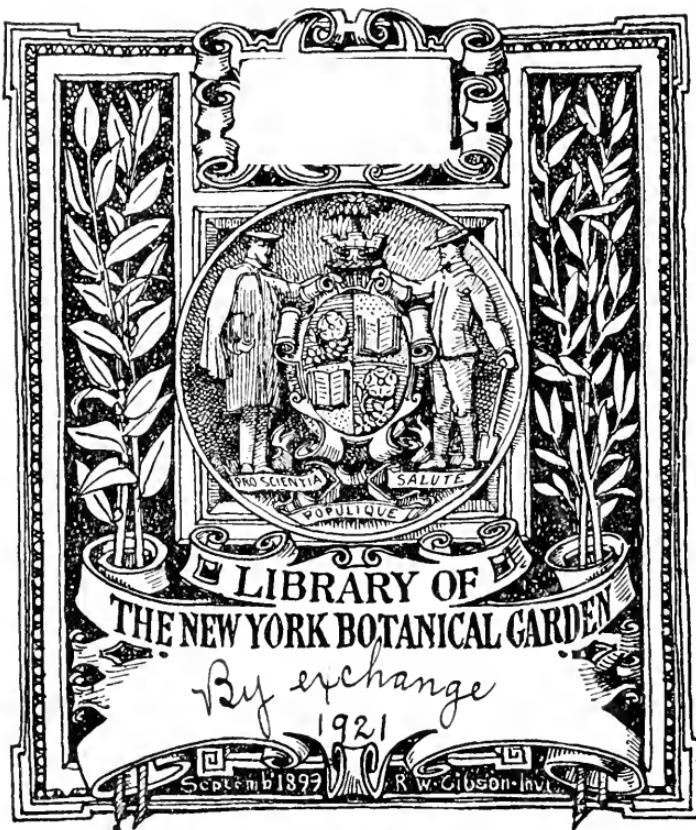


REPORT
OF
FOREST COMMISSIONER

MAINE 1916



HELP WANTED!

TO PROTECT THE FORESTS OF MAINE FROM FIRES

A FOREST FIRE

Kills all growth and makes barren land.
Pollutes water supply and endangers our health.
Destroys timber that otherwise would be cut and manufactured.
Destroys fish and game which means much to the guide and camp owner, also to the sportsman.

It Pays to be Careful.

Look out for all small fires and we will have no big ones.
Hunters and Fishermen cause many fires through carelessness.
It is a poor woodsmen who leaves a camp fire burning.
One big forest fire will offset many years of conservation.

Will YOU Follow These Suggestions.

DON'T throw away burning matches and tobacco; it only takes a second to make sure they are out.
DON'T leave a camp fire burning; build a small one in a safe place and use water and earth in putting it out.
DON'T burn brush or slash when the woods are dry; talk it over with your fire warden.

Care and caution in the woods will add wealth to Maine and will make our State a better place to live in.

The State law in regard to forest fires is strict and it is the duty of every citizen to help enforce it.

Put out any fires you see and if unable to do it alone, notify the nearest Fire Warden AT ONCE.

Five Dollars Fine for defacing or destroying this notice.

FRANK E. MACE,
Forest Commissioner, Augusta, Me.

IN COOPERATION WITH THE
FOREST SERVICE, U.S. DEPT. OF AGRICULTURE

ELEVENTH REPORT

OF THE

FOREST COMMISSIONER

OF THE

STATE OF MAINE

1916

WATERVILLE

SENTINEL PUBLISHING COMPANY

1917

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STATE OF MAINE.

To His Excellency, Oakley C. Curtis, Governor of Maine:
I herewith submit my report as Forest Commissioner for the
years 1915 and 1916.

FRANK E. MACE,
Forest Commissioner.

DEPARTMENT OF STATE LANDS AND FORESTRY.

Land Agent and Forest Commissioner,

FRANK E. MACE, Augusta, Me.

Deputy Forest Commissioner,

EDWARD A. MATHES, Augusta, Me.

Clerk and Stenographer,

GLADYS D. MATHES, Augusta, Me.

Director of Public Instruction in Forestry,

PROF. JOHN M. BRISCOE, Orono, Me.

Associate Professor of Forestry,

CARLETON W. EATON, Calais, Me.

CHAPTER 8.

The Public Lands. Land Agent. Location and Care of Lots for Public Uses. Forest Commissioner and Preservation of Forests. Maine Forestry District.

Sections 1-14 The Land Agent, his Appointment, Powers and Duties.
Sections 15-27 Lands Reserved for Public Uses.
Sections 28-59 The Forest Commissioner and Preservation of Forests.
Sections 60-73 The Maine Forestry District.

THE LAND AGENT.

Sec. 1. Appointment of Land agent; bond; duties and restrictions of land agent. R. S. c. 7, § 1. The governor with the advice and consent of council shall appoint a land agent, who shall hold his office during their pleasure, and shall give bond to the state in the sum of fifty thousand dollars with sufficient sureties or with one or more surety companies authorized to do business in the state, as surety or sureties, satisfactory to the governor and council for the faithful performance of the duties of his office. The land agent shall superintend and manage the sale and settlement of the public lands. He shall not when appointed, or while in office, be directly or indirectly concerned in the lumber business on the state lands, or in the purchase thereof, or of any timber or grass growing or cut thereon.

Sec. 2. To receive moneys arising from land and attend personally to the duties of his office; no commission allowed; traveling expenses to be paid; number of his clerks and their pay. R. S. c. 7, § 2. He shall receive all moneys and securities accruing to the state from the sale of lands, timber and grass, or in payment for timber or grass cut by trespassers, and shall pay to the treasurer of state all moneys so received and found due from him on settlement. All securities shall be made payable to said treasurer. He shall personally attend to the duties of his office, so far as practicable; no commission shall be allowed him for his disbursements or collections, and nothing shall be allowed him for traveling expenses from his home to the land office, unless on official business, nor for transportation of the official records, unless money is paid out specifically therefor. All persons employed by him shall be sworn to the faithful discharge of their duties, and they shall not be concerned directly or indirectly, in the purchase of lands, or of timber or grass on lands belonging to the state. The number of his clerks shall be determined by the governor and council, who shall fix their compensation.

Sec. 3. Land agent to execute deeds, collect notes, and account monthly to treasurer of state. R. S. c. 7, § 3. He shall execute deeds in behalf of the state, conveying lands which have been granted by the legislature or sold by lawful authority, as soon as the grantees have complied with the conditions of their respective grants; collect all sums due the state by note or from any source mentioned in this chapter; collect the interest on all notes at least annually, and pay at the expiration of every month into the state treasury all moneys so collected or received by him, after deducting all such payments as devolve upon him to make.

69 Me. 78.

Sec. 4. Certified copies of records of deeds in land office recorded in registry of deeds, legal evidence. R. S. c. 7, § 4. A copy from the records in the land office of a deed from the state or the land of the state, or of a deed from the state and from the commonwealth of Massachusetts of the undivided lands of the state and of said commonwealth, or a deed from said commonwealth of the lands of said commonwealth in Maine, certified by the land agent or other legal custodian of such records as a true copy thereof, may be filed and recorded in the registry of deeds in the county or registry district where the land lies, with the same effect as if the deed itself had been recorded, whether said deed shall or not have been acknowledged by the agent or other person making the same; and such record shall have all the force and effect of a record of deeds duly acknowledged, and certified copies thereof from such registry shall be evidence when the original would be.

77 Me. 76.

NOTE. Tax deeds from treasurer of state, and releases and certificates to be recorded in land office, c. 10, § 46.

Sec. 5. Board for surveys of lands; plans and field notes to be kept at land office. R. S. c. 7, § 5. The governor and council and land agent constitute a board under whose direction all surveys of land shall be made. An accurate plan or map of all lands surveyed shall be returned to the land office and entered upon the plan-books within three months after the survey is completed, on which shall be laid down all lakes, ponds, rivers, streams, falls, mill sites and roads. The field notes of such surveys shall be deposited in the land office within three months and shall contain a description of the growth, soil and general character of the township, and of every lot, if surveyed into lots. Said plans and field notes shall be kept at the office in Augusta, open for inspection at all times when the land agent or his assistant is there; he shall aid in furnishing information about the public lands to all who seek for it at his office.

Sec. 6. Land agent authorized to sell lands, and rights to cut timber belonging to the state. R. S. c. 7, § 6. 1915, c. 306, § 1. The land agent, under direction of the governor and council, shall sell at public or private sale and grant rights to cut timber and grass belonging to the state and may lease camp sites on lands belonging to the state, on

such terms as they direct; also the right to cut timber and grass and lease camp sites on lots reserved for public uses in any township or tract of land until the same is incorporated. Preference in such sales or leases shall be given to citizens of the State of Maine.

NOTE. License required for maintaining sporting camp within Maine forestry district, c. 33, § 15.

Sec. 7. Agent may grant permits; bond; timber held for payment. R. S. c. 7, §§ 40, 41, 42. The land agent may grant permits to individuals, to cut and haul timber of all kinds upon lands owned by the state, on such terms and conditions as he thinks proper. Persons obtaining such permits shall give bond to the land agent with satisfactory sureties for payment of stumpage and the performance of all conditions of the permit. All timber cut under permits is the property of the state until the stumpage is paid in full.

47 Me. 23.

Sec. 8. Surveyors, their appointment, oath and duty. R. S. c. 7, § 44. Surveyors or scalers shall be appointed by the land agent, and sworn; they shall scale all timber cut under permits, superintend the cutting thereof, and make return to the land agent of the number and quality of the logs cut, whether hauled or not, and the number of feet board measure, and shall see that the timber is cut clean and without strip or waste.

Sec. 9. Land agent's report. R. S. c. 7, § 50. 1915, c. 306, § 3. The land agent shall on the first secular day of December biennially report to the governor a particular account of all the doings of his office for the two preceding years; the state auditor shall audit and settle his accounts at the close of each year, and at such other times as the governor and council may designate.

Sec. 10. All deeds made absolute; state lands to be sold at option of land agent in No. 4, R. 4, W. E. L. S., and in No. 14, R. 4, W. E. L. S. R. S. c. 7, § 35. All deeds given by the land agent, providing in substance, "that if the grantee has failed to perform all the duties required of a settler, in conformity to chapter five of the revised statutes, approved April seventeen, eighteen hundred and fifty-seven, and all other acts, additional or amendatory thereto, the deed shall be void," convey as absolute and complete a title as if such condition or reservation was not contained in said deed. Lots or sections of land in township number four, range four, W. E. L. S., and lots of land in township number fourteen, range four, W. E. L. S., exceeding the quantity allowed to be sold to settlers, may be sold if, in the judgment of the land agent, such lots or sections are not valuable for lumber growth, but are found to be better adapted for settlement than for other purposes.

Sec. 11. Settler's lot to the value of \$1,000, exempt from attachment. R. S. c. 7, § 38. Whoever purchases a lot of wild land of the state for settlement, and complies with the condition of purchase, may hold it with the improvements thereon, free from attachment and levy on exe-

cution, while he remains in actual possession thereof. The value so exempted, shall not exceed one thousand dollars, to be set off to the owner in such portions of the lot as he directs, by the appraisers appointed to levy an execution, as real estate is set off and appraised on execution.

Sec. 12. Descends to children free from debts of deceased, until youngest is 18 years old. R. S. c. 7, § 39. On the death of such purchaser, such lot and the improvements shall descend to his children, subject to the right and interest of his widow by descent, and are not liable for payment of his debts, unless his other property is insufficient therefor; and, in that case, his children shall have the occupancy and improvement thereof, subject to the right and interest of the widow by descent, until the youngest surviving child attains the age of eighteen years. The remainder, after the estate of the widow, and after the youngest surviving child attains said age, may be sold as other estates of deceased persons for payment of such debts, if the other estate of the deceased is not sufficient. If he dies without issue, such lot shall descend and be disposed of like other property.

Sec. 13. Trespasses, prosecutions for them; measure of damages. R. S. c. 7, § 9. If any person unlawfully enters and trespasses upon the public lands, or upon any lands reserved for public uses, while under care of the agent, and cuts, takes or carries away, any trees or grass upon said lands, he and all persons who furnish teams, implements, apparatus or supplies of provisions, or of other articles, used in committing and carrying on such trespasses, are trespassers, jointly and severally liable in damages for such trespasses, and they may be sued therefor in any county. The measure of damages is the highest price which such timber, logs or other lumber, or hay, would bring at the usual place of sale thereof. Nothing in this section affects the right of the state to seize and sell any timber, logs, lumber or hay, cut as aforesaid. At such sale no person, who was in any way concerned in committing such trespass, or in supplying or aiding those who committed it, shall become a purchaser directly or indirectly.

45 Me. 69; 49 Me. 390; 78 Me. 264.

Sec. 14. Damages, if suit is for benefit of an individual. R. S. c. 7, § 10. When an action for such trespass is prosecuted in the name of the state for the benefit of an individual, the principles of decision and the measure of damages shall be the same as in like actions between individuals.

See c. 100, § 9.

LANDS RESERVED FOR PUBLIC USES.

Sec. 15. Reservation for public uses; may be located by agreement. R. S. c. 7, § 11. In every township there shall be reserved, as the legislature may direct, one thousand acres of land, and at the same rate in all tracts less than a township, for the exclusive benefit of such town or

tract, to average in quality, situation and value as to timber, with the other lands therein. In townships or tracts sold and not incorporated, the lands reserved for public uses may be selected and located by the land agent and the proprietors, by a written agreement, describing the reserved lands by metes and bounds, signed by said parties, and recorded in the land office. The plan or outline of the lands so selected shall be entered on the plan of the township or tract in the land office, which shall be a sufficient location thereof.

See Articles of separation, condition 7. See c. 17, §§ 61-63; 26 Me. 205; 30 Me. 377; 97 Me. 336; 112 Me. 424.

Sec. 16. Location without agreement. *R. S. c. 7, § 12.* When the land agent and proprietors of such township or tract cannot agree on such location, if the right to cut the timber and grass thereon until the town is incorporated or organized as a plantation has not been sold, the land agent may petition the supreme judicial court for the appointment of commissioners to make the location as hereinafter provided. The petition may be filed, and the proceedings under it had in any county.

97 Me. 336.

Sec. 17. Land agent to have care of lots located; may sell timber and grass. *R. S. c. 7, § 14.* The land agent shall have the care of the reserved lands in all townships or tracts, until they are incorporated, and the fee becomes vested in the town. He may, from time to time, sell for cash for such sum as he thinks just and reasonable, the timber and grass thereon, or the right to cut the same, until incorporated into a town, except the grass growing on improvements made by an actual settler. When so sold, he shall give the purchaser a permit under his hand and seal, setting forth the terms of the contract, which permit shall be recorded in the office.

See c. 17 §§ 50-60; 30 Me. 381; 45 Me. 69; 49 Me. 390; 61 Me. 446; 78 Me. 264; 97. Me. 336.

Sec. 18. Land agent to keep an account with lots. *R. S. c. 7, § 15.* The land agent shall keep an account with each such township and tract, in which shall be entered all expenditures made on account thereof, and all sums received therefrom. He shall settle his account of such receipts and expenditures annually with the state auditor and pay to the treasurer of state the balance in his hands, specifying each township and tract from which it was received.

61 Me. 447, 448; 97 Me. 336.

Sec. 19. Treasurer also to keep account. *R. S. c. 7, § 16.* The treasurer shall keep a separate account with the reserved land in each township, in which account he shall enter all sums by him received and paid on account thereof; and the balance shall remain in the treasury until such township or tract is by law authorized to receive it; and thereupon it shall be paid to the proper officers thereof.

61 Me. 447, 448; 97 Me. 336.

Sec. 20. Money to constitute school fund. *R. S. c. 7, § 17.* The money arising from the sale of timber and grass or from trespasses on reserved lands, paid into the treasury of the county in which the township is situated, or into the state treasury, constitutes funds for school purposes, of which the income only shall be expended and applied as is by law provided.

61 Me. 447, 448; 97 Me. 336.

Sec. 21. Management of fund. *R. S. c. 7, § 18. 1915, c. 114.* The interest shall be added to the principal of such fund, until the inhabitants of such township or tract are incorporated into a town or organized as a plantation, and establish in such plantation one or more schools, and until the first day of January next preceding the date upon which the treasurer of said plantation shall call for such interest, unless previously expended according to law. When any such township is incorporated as a town, said funds belonging to it shall be paid by the treasurer of state to the treasurer of the trustees of the ministerial and school funds therein, to be added to the funds of that corporation, and held and managed as other school funds of that town are required to be held and managed. If such township or tract is organized as a plantation, the interest of said fund shall be paid annually by the treasurer of state to the treasurer of such plantation to be applied toward the support of schools according to the number of scholars in each school. Said interest shall be cast up to the first day of each January, by the treasurer of state. The state superintendent of public schools shall file a list of such plantations with the amount due for interest for the preceding year according to a record of such amounts to be furnished to him by the treasurer of state, in the office of the state auditor, who shall thereupon insert the name and amount due such plantations in the first warrant drawn in that year. The state superintendent of public schools shall be satisfied that all such plantations are organized, and that schools have been established therein according to law, that assessors are sworn and qualified, and that the treasurers of such plantations have given bonds as required by law.

61 Me. 447; 97 Me. 336.

Sec. 22. When school lands revert to state, land agent shall exercise control of lands and fund. *R. S. c. 7, § 19.* When the incorporation of a town is repealed, the care and custody of the school lands therein reverts to the land agent and he has the same powers in relation thereto which he would have if such town had never been incorporated; and the school funds of such town shall be collected and transmitted to the treasurer of state and by him made a part of the permanent school fund belonging to such township or tract. The land agent is charged with the duty of enforcing the provisions of this section and is authorized to commence and maintain suits in the name of the state for this purpose.

Sec. 23. Locations of land where portions are reserved on grant, how made. *R. S. c. 7, § 20.* When in the grant of townships or parts

thereof, certain portions of them are reserved for such townships, or for public uses, and they have not been lawfully located in severalty by the grantee for the purposes expressed in the grant, the supreme judicial court in the county where the land lies, on application of the land agent, may appoint three disinterested persons, and issue to them a warrant, under the seal of the court, requiring them, as soon as may be, to locate in separate lots, the portions reserved for such purposes, and to designate the use for which each lot is so reserved and located, such lots to be of average quality with the residue of lands therein.

See c. 93 § 29; 17 Me. 426; 26 Me. 205; 29 Me. 42; 30 Me. 219; 33 Me. 304; 104 Me. 551; 112 Me. 423.

Sec. 24. Proceedings by committee; record. *R. S. c. 7, §§ 21, 22, 23.* Said committee, before acting, shall be sworn before a justice of the peace; and a certificate thereof shall be indorsed on the warrant. They shall also give notice of their appointment, and of the time and place of their meeting to execute it, by publishing it in some newspaper in the state to be designated by the court, and by posting written notifications in two or more public places in the same plantation or town, if so ordered by the court, at least thirty days next prior to their meeting. They shall make return of said warrant and their doings thereon, under their hands, to the next supreme judicial court in the county after having completed the service; which, being accepted by the court, and recorded in the registry of deeds in the county or registry district where the land is situated within six months, shall be a legal assignment and location of such reserved portions for the uses designated.

8 Me. 135; 26 Me. 205.

Sec. 25. Location by grantee, how made. *R. S. c. 7, § 24.* When the grantee of any such lands severs and locates such reserved portions thereof for the purposes mentioned in the grant, designating the use for which each lot is located, and presents it to said court, the court may confirm it and such location shall then be legal and conclusive, being recorded as before mentioned.

Sec. 26. Location on partition. *R. S. c. 7, § 25.* Such severance and location may also be made and completed in the manner prescribed in section twenty-nine of chapter ninety-three.

Sec. 27. Exceptions may be filed. *R. S. c. 7, § 26.* Any person aggrieved by the opinion, direction or judgment of said court in matter of law, in a proceeding for the location of such public lots, may allege exceptions thereto as in other actions.

NOTE. Review of proceedings for location of lands reserved for public uses, c. 94, § 1.

In cases of inquests of office, plan to be filed in land office, c. 98, § 8.

Duties of land agent as to timber and grass on reserved lands forfeited for taxes, c. 10, §§ 55-6.

FOREST COMMISSIONER AND PRESERVATION OF FORESTS.

Sec. 28. Land agent made forest commissioner; duties; report; deputy forest commissioner; tenure. R. S. c. 7, § 51. 1909, c. 193, § 12. The land agent shall be forest commissioner of the state. He shall make a collection and classification of statistics relating to the forests and connected interests of the state, and institute an inquiry into the extent to which the forests of the state are being destroyed by fires and by wasteful cutting, and ascertain so far as he can as to the diminution of the wooded surface of the land upon the watersheds of the lakes, rivers and water powers of the state and the effect of such diminution upon the water powers and on the natural conditions of the climate. The information so gathered by him, together with his suggestions relative thereto shall be included in the report to be made by him biennially to the governor on or before the first day of December. The chief clerk to the land agent shall be deputy forest commissioner. He shall hold office during the pleasure of the forest commissioner and perform such duties as the latter may prescribe.

Sec. 29. Selectmen shall be fire wardens; duties and authority; compensation; penalty for refusing to assist; damages in case of neglect of selectmen; application to cities. R. S. c. 7, § 52. 1909, c. 164, § 1. The selectmen of towns shall be forest fire wardens therein, and the services of such selectmen acting as said fire wardens, shall be paid for at the same rate as is paid for their other official services. Whenever a fire is discovered, fire wardens shall take such measures as may be necessary for its control and extinguishment. For this purpose they may call upon any persons in the town for assistance, and such persons shall receive such compensation, not exceeding twenty cents per hour, as said selectmen may determine, the same to be paid by the town; provided that no town shall be holden to pay for extinguishing forest fires in any year an amount greater than two per cent upon its valuation for purposes of taxation. If any person so ordered to assist and not excused from said service by said forest fire warden on account of sickness, disability, or some important business or engagement, shall neglect to comply with any such order he shall forfeit the sum of ten dollars, to be recovered in action of debt in the name and to the use of the town, by the treasurer thereof. If any person shall suffer damage from fire in consequence of the negligence or neglect of the selectmen of any town to perform the duties required by this section, such person shall have an action on the case to recover from the town where the fire occurs to the amount of his damages so sustained not to exceed two per cent of the valuation of said town. This section shall also apply to cities. The chief engineers of the fire departments of cities shall be forest fire wardens and shall have the same powers and duties in carrying out the provisions hereof as selectmen of towns.

Sec. 30. Forest districts to be established; chief forest fire warden, and deputies; tenure of office. 1905, c. 44, §§ 1, 2. The forest commis-

sioner shall take measures for the prevention, control and extinguishment of forest fires in all plantations and unorganized townships, not included in Maine Forestry District, and to this end he shall establish such forest districts as he may deem necessary for effective protection against loss or damage by such fires. He shall appoint in and for each of said districts, so established, a chief forest fire warden, and he shall also appoint within such districts such number of deputy forest fire wardens as in his judgment may be required to carry out the provisions of the two following sections, assigning to each of the latter the territory over and within which he shall have jurisdiction. All chief and deputy forest fire wardens, so appointed, shall hold office during the pleasure of said commissioner, be sworn to the faithful discharge of their duties by any officer authorized to administer oaths, and a certificate thereof shall be returned to the office of such commissioner.

Sec. 31. Duties of chief forest fire wardens; compensation; duties of deputies; compensation. 1905, c. 44, § 3. The said chief forest fire wardens, under the direction of said commissioner, shall have general supervision of their respective districts and of the deputy forest fire wardens therein. Each chief forest fire warden, when directed by the said commissioner, shall patrol the forests of his district for the purpose of searching out, extinguishing and guarding against forest fires. He shall investigate and gather evidence regarding the causes of forest fires, enforce all laws relating to forests and forest preservation, arrest all violators thereof, prosecute all offenses against the same and in this connection shall have the same power to serve criminal processes against such offenders and shall be allowed the same fees as a sheriff, or his deputy, for like services, and shall have and enjoy the same right as a sheriff to require aid in executing the duties of his office. The chief forest fire wardens shall perform such other duties, at such times, and under such rules and regulations, as the said commissioner may prescribe, and each shall receive as compensation two dollars and fifty cents for each and every day of actual service, with an allowance for expenses of travel and subsistence not to exceed two dollars daily for such period. The commissioner may authorize the employment of suitable persons to assist said chief forest fire wardens in patrolling their respective districts and every person so employed shall be paid fifteen cents for each hour of service so rendered by him and be provided with subsistence during such period. Deputy forest fire wardens shall perform such duties, at such times and under such rules and regulations, as the chief fire warden of the district, with the approval of said commissioner, may prescribe and they shall receive as compensation two dollars for each and every day of actual service.

Sec. 32. Duties when fire occurs within district; assistance; statement of expenses. 1905, c. 44, § 4. Whenever a fire occurs on, or is likely to do damage to forest lands within the district of any chief forest fire warden, he shall take immediate action to control and extinguish the same. If such fire occurs upon or is likely to do damage to

forest lands within the territory of a deputy forest fire warden and the chief fire warden of the district is not present, the deputy forest fire warden, having jurisdiction of the territory, shall forthwith proceed to control and extinguish the same, and he shall meanwhile, with all consistent dispatch, cause the said chief fire warden of the district to be notified of the occurrence of such fire. Until the arrival of the chief warden at the place of fire the deputy warden shall be in charge of the control and extinguishment of the same. For the purpose of controlling and extinguishing fires as aforesaid, chief forest fire wardens, and deputy forest fire wardens when in charge of the control and extinguishment of forest fires or when so directed by the chief warden, may summon to their assistance citizens of any county, and each person so summoned and assisting shall be paid fifteen cents for each hour of service rendered by him. Immediately after the extinguishment of a fire the deputy forest fire warden who for any time may have been in charge of the same shall make return to the chief warden of the district of the expense thereof during the period of his being in charge, including the names of the persons so summoned and assisting, with their post-office addresses and the hours of labor actually performed by each under his direction. The return shall be made upon oath and the said chief warden is hereby authorized and empowered to administer such oath. Upon receipt of such return the said chief fire warden shall carefully examine and audit the same and he may direct the deputy to amend and correct any return found to be incomplete, incorrect or insufficient in form. If upon examination and auditing of said return, and investigation of the subject matter thereof, said chief fire warden believes said return to be just and correct, he shall endorse his written approval thereon and forward the same so approved to said forest commissioner. The chief fire warden of every district burned by a forest fire shall, upon the extinguishment of such fire, promptly forward an exact and detailed statement of the expense, if any, which said chief fire warden may have incurred in connection with the extinguishment of such fire, to the said forest commissioner, who may confirm, reject or recommit either or both said approved return of said deputy or said detailed statement of said chief fire warden if justice so requires.

Sec. 33. Expenses, from what fund paid. 1905, c. 44, § 5. All expense incurred under the provisions of the three preceding sections shall be paid from the funds appropriated to and for the use of the forest commissioner.

Sec. 34. State fire wardens, and their duties. R. S. c. 7, § 54. Fish and game wardens are hereby made state fire wardens; they shall, while in and about the woods, caution all sportsmen of the danger from fires in the woods, and extinguish all fires left burning by any one, if within their power; and shall give notice to any and all parties interested when possible, of fires raging and beyond their control, to the end that the same may be controlled and extinguished.

Sec. 35. Penalty for not extinguishing camp, cooking or other fires; exceptions; fines, how disposed of. R. S. c. 7, § 55. Whoever by himself, or by his servant, agent or guide, or as the servant, agent or guide of any other person, shall build a camp, cooking or other fire, or use an abandoned camp, cooking or other fire in or adjacent to any woods in this state, shall, before leaving such fire, totally extinguish the same, and upon failure to do so such person shall be punished by a fine of fifty dollars, provided that such fires built upon the sea beach in such situation that they cannot spread into forest land, woodland, or cultivated lands or meadows, shall not be construed as prohibited by this section. One-half of any fine imposed and collected under this section shall be paid to the complainant.

Sec. 36. Notices shall be erected, that all fires must be extinguished. R. S. c. 7, § 56. Selectmen shall erect in a conspicuous place at the side of every highway as they may deem proper, and at suitable distances alongside the rivers and lakes of the state frequented by camping parties, tourists, hunters and fishermen, in their respective towns, notices in large letters to be furnished by the forest commissioner, substantially in the following form: "Camp fires must be totally extinguished before breaking camp, under penalty of not to exceed one month's imprisonment or one hundred dollars fine, or both as provided by law. — — —, Forest Commissioner." The forest commissioner shall furnish owners of woodlands situated within this state when called upon so to do, notices of similar tenor to be posted at the expense of said owners upon their respective lands.

Sec. 37. Hunters required to use non-combustible wads. R. S. c. 7, § 57. All persons engaged in hunting game on any of the woodlands within any town or unincorporated place in this state, shall use non-combustible wads in the loading of firearms used by them.

Sec. 38. Governor may suspend open season for hunting. 1909, c. 52, § 1. Whenever, during an open season for the hunting of any kind of game or game birds in this state, it shall appear to the governor that, by reason of drought, the possession of firearms in the forests is liable to cause forest fires, he may, by proclamation suspend the open season and make it a close season for such time as he may designate.

Sec. 39. All laws relating to close season shall be in force during suspended season. 1909, c. 52, § 2. During the time which shall by such proclamation be made a close season, all provisions of law covering and relating to the close season shall be in force, and a person violating a provision of the same shall be subject to the penalty therein prescribed. Whoever enters upon the wild lands of the state carrying or having in his possession any firearms, or shoots during the close season fixed by proclamation of the governor, as provided in the preceding section, any wild animal or bird for the hunting of which there is no close season otherwise provided by law, shall be punished by a fine of one hundred dollars and costs.

Sec. 40. Proclamation shall be published and posted; copy filed with secretary of state. 1909, c. 52, § 3. Such proclamation shall be published in such newspapers of the state and posted in such places and in such manner as the governor may order in writing. A copy of such proclamation and order, shall be filed with the secretary of state. A like attested copy shall be furnished to the forest commissioner, who shall attend to the posting and publication of the proclamation. All expense thereof and all the expense of enforcing the provisions of the proclamation shall be paid by said commissioner, after allowance by the state auditor, from any funds in the state treasury not otherwise appropriated.

Sec. 41. When proclamation may be annulled. 1909, c. 52, § 4. If after the issuing of the proclamation as provided in section thirty-eight, by reason of rains or otherwise, the governor is satisfied that the occasion has passed for the issuance of the proclamation, he may annul it by another proclamation issued as provided for the issuance of the first proclamation.

Sec. 42. Inquiry shall be made into origin of woodland fires. R. S. c. 7, § 58. 1909, c. 164, § 2. Municipal officers in towns shall proceed immediately to a strict inquiry into the cause and origin of fires within woodlands; and in all cases where such fires are found to have originated from the unlawful act of any person, to cause the offender to be prosecuted without delay.

Sec. 43. Selectmen shall make report of any forest fire. R. S. c. 7, § 59. 1909, c. 164, § 3. The selectmen of towns in which a forest fire of more than one acre in extent has occurred, within a month shall report to the forest commissioner the extent of area burned over to the best of their information, together with the probable amount of property destroyed, specifying the value of timber as near as may be, and the amount of cord wood, logs, bark or other forest product, fencing, bridges and buildings that have been burned. They shall also report the causes of these fires if they can be ascertained, and the measures employed and found effective in checking their progress. Blanks for such reports shall be furnished by the forest commissioner at the expense of the state.

Sec. 44. Forest commissioner shall maintain fire patrol, along railroads. 1911, c. 35, § 1. 1915, c. 68. Whenever in the judgment of the forest commissioner, the woodlands along the railroads traversing the forest lands of the state, are in a dry and dangerous condition, he shall maintain a competent and efficient fire patrol along the right of way or lands of such railroads.

Sec. 45. Fires shall be reported to forest commissioner. 1911, c. 35, § 3. All fires started upon the right of way of any railroad or lands adjacent thereto shall be immediately reported to the commissioner upon blanks to be furnished by him, by the patrolman within whose limits the fire originated, setting forth the origin of such fire, the

quantity and quality of the land burned over, and, if the fire was started by a locomotive, he shall give the number thereof.

Sec. 46. Expense of fire patrol shall be paid by railroad company. 1911, c. 35, § 2. The forest commissioner shall keep, or cause to be kept, an account of the cost of maintaining such fire patrol along the line of such railroad, including therein the wages and expenses of the employees engaged in maintaining such fire patrol, and the total cost thereof shall be paid to the forest commissioner, by the railroad company along whose land or right of way such patrol is maintained, such payment to be made monthly or on the presentation of the bills therefor. All such funds received by said commissioner shall be credited to the fund for the protection of the forests against fire from which it was drawn.

Sec. 47. Railroad company not released from damages. 1911, c. 35, § 5. Nothing in the three preceding sections shall be construed as releasing any railroad company from any damage caused by fires set by their locomotives or employees.

Sec. 48. Railroad companies shall remove all inflammable material from right of way. R. S. c. 7, § 60. 1911, c. 35, § 4. Every railroad company whose road passes through waste or forest lands, shall during each year cut and burn off or remove from its right of way all grass, brush or other inflammable material, but under proper care and at times when fires are not liable to spread beyond control; but no railroad employee shall build a fire to burn rubbish along the right of way through forest lands when forbidden to do so by the forest commissioner, or his wardens.

Sec. 49. Locomotives shall be provided with spark arresters. R. S. c. 7, § 61. 1913, c. 177. All locomotives which shall be run through forest lands, shall be provided with approved and efficient arrangements for preventing the escape of fire and sparks. The forest commissioner may petition the public utilities commission, setting forth that there is danger of fire to lands within the Maine forestry district from the operation of locomotives on any railroad; and said commission may, after notice and hearing thereon, make such orders and regulations relating to the equipment and operation of locomotives, during times of drought or danger of forest fires, as they deem necessary for the prevention of fires on said lands.

Sec. 50. Railroad companies liable for damages caused by employees; smoking car windows shall be screened. R. S. c. 7, § 62. 1913, c. 86. No railroad company shall permit its employees to deposit fire, live coals or ashes, upon its track in the immediate vicinity of woodlands or lands liable to be overrun by fires, and any railroad company operating a railroad running through the Maine forestry district shall between the first day of May and the tenth day of November following in each year, fasten down or secure screens or other obstructions in the windows of all cars or apartments of cars in which smoking is al-

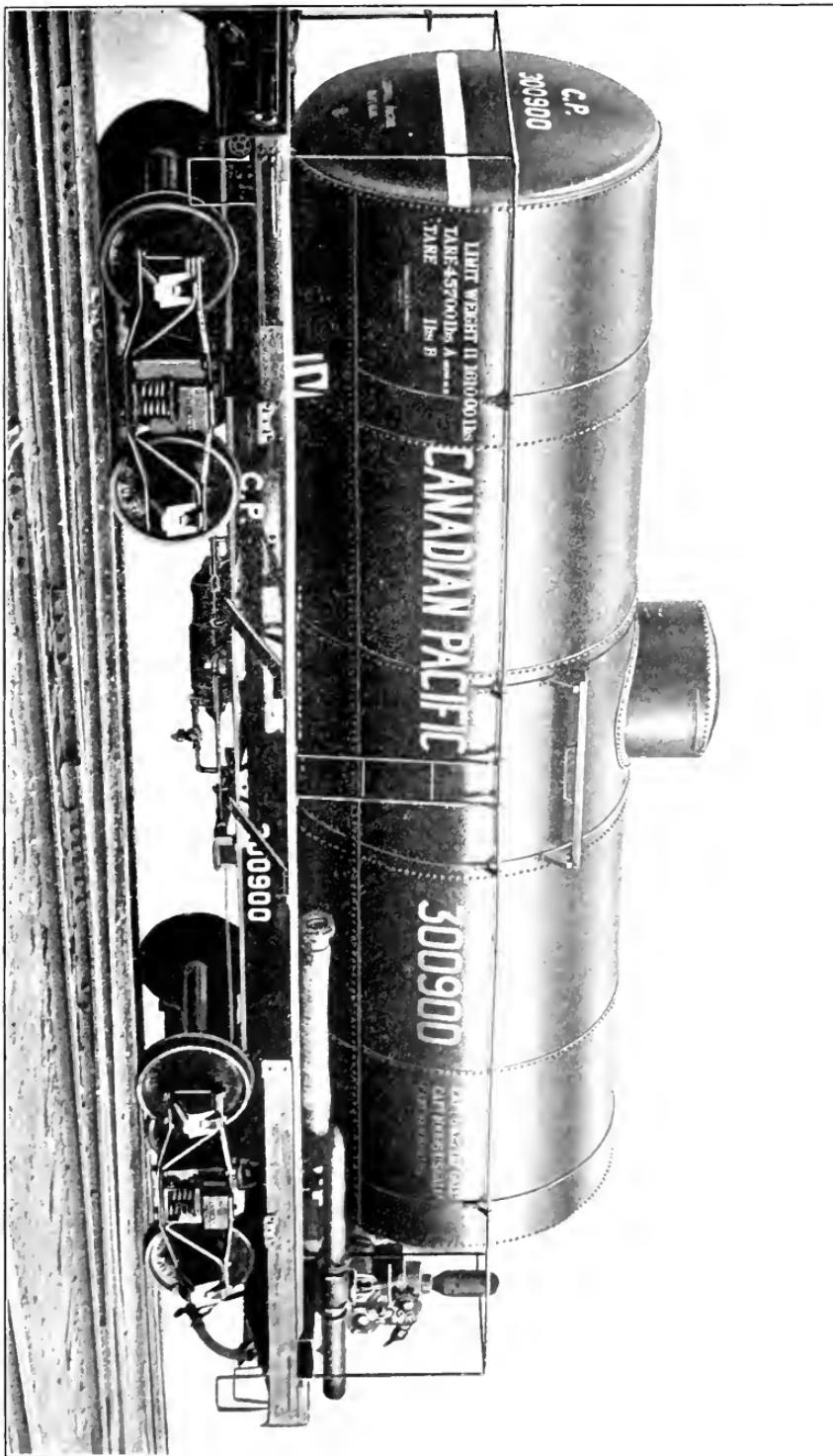
lowed, to prevent the throwing of burning matches, burning cigars, burning cigarettes or parts thereof from the windows of such cars. When engineers, conductors or trainmen discover that fences along the right of way or woodlands adjacent to the railroads, are burning or in danger from fire, they shall report the same at their next stopping place which shall be a telegraph station.

Sec. 51. Railroads under construction, liable for all damages to forest growth caused by employees; penalty, if employees fail to extinguish fires set along line; persons in charge of men, required to see that the provisions of this section are complied with. *R. S. c. 7, § 63.* For all damages caused to forest growth by any person employed in the construction of any railroad built in this state after the third day of May, eighteen hundred and ninety-one, the company owning such road shall be primarily liable to the person or persons so damaged. During the construction of such roads through woodland, there shall be kept posted in conspicuous places on each line of the roadways at distances of two hundred feet, abstracts of the laws relating to forest fires. Any person employed in the construction of such railroads, who shall set or cause to be set any fire along the line of said roads, shall, before leaving the same, totally extinguish said fires, and upon failure to do so, such person shall be punished by a fine of not exceeding five hundred dollars or by imprisonment in the county jail of not exceeding sixty days, or by both such fine and imprisonment. All persons having charge of men in the construction of such railroads shall see that the provisions of this section are carefully complied with, and for any negligence or want of ordinary care on their part in relation to the same, they shall be liable to the penalties imposed by this section.

Sec. 52. Penalty for violation of §§ 48-50. *R. S. c. 7, § 64.* Any railroad company violating the requirements of sections forty-eight, forty-nine and fifty, shall be liable to a fine of one hundred dollars for each offence.

Sec. 53. Inflammable material along railroads and ways shall be removed. *1915, c. 196, § 1.* Any person, firm, corporation or agent, cutting any forest growth on property adjacent to the right of way of any railroad or highway within the state, shall leave the growth uncut on the land within fifty feet of the limit of the right of way of a railroad or center of the wrought portion of any plantation, town, city, county or state road; or shall dispose of slash and debris caused by cutting in such a manner that inflammable material shall not remain on the ground within fifty feet of the limit of the right of way of a railroad or center of the wrought portion of any plantation, town, city, county or state road.

Sec. 54. Slash and debris, how to be disposed of. *1915, c. 196, § 2.* Slash and debris accumulating by the construction and maintenance of railroads, highways or telegraph or telephone lines, shall be disposed of in such a manner that inflammable material shall not be left on the ground.



Type of tank cars used by Canadian Pacific Railroad for fighting fires on or adjacent to its right of way in Maine.

Sec. 55. Forest commissioner may dispose of slash and debris and recover double the cost in action of debt; attorney-general shall prosecute; lien on land enforced by attachment. 1915, c. 196 § 3. When any person, firm, corporation or agent shall have failed to dispose of slash and debris as provided by the two preceding sections, the forest commissioner shall cause such slash and debris to be so disposed of. He shall pay the expense of so disposing of such slash and debris from any funds at his disposal, legally applicable to such purpose; and he or his successor in office shall be entitled to recover double the amount of such expenditures in an action of debt, to be prosecuted by the attorney-general in the supreme judicial court in the county of Kennebec, against the person, firm, corporation or agent whose duty it was to dispose of such slash or debris; and there shall be a lien on the land on which the cutting of the forest growth took place, to secure any judgment recovered in such action, to be enforced by attachment in said action, made within six months after such expenditures were made. The sum recovered and collected in such action shall be returned to and become a part of the fund from which the expenditures were made. Provided, however, that any person, firm, corporation or agent cutting wood or timber during the winter, after November first, shall have until May first following in the Maine forestry district, and until April first in the remainder of the state, to remove such slash and debris. If such slash and debris are destroyed by burning, such burning shall be done with the permission of the forest commissioner.

Sec. 56. Elementary instruction in forestry in public schools. R. S. c. 7, § 65. The forest commissioner shall take such measures as the state superintendent of public schools and the president of the University of Maine may approve, for awakening an interest in behalf of forestry in the public schools, academies and colleges of the state, and of imparting some degree of elementary instruction upon this subject therein.

Sec. 57. Commissioner shall issue circulars of advice for care of woodlands. R. S. c. 7, § 66. He shall prepare tracts or circulars of information, giving plain and concise advice for the care of woodlands and for the preservation of forest growth. These publications shall be furnished to any citizen of the state upon application.

Sec. 58. Copies of §§ 28-59 shall be printed and distributed to selectmen and posted; penalty for destroying notices. R. S. c. 7, § 67. The forest commissioner, at the expense of the state, shall cause copies of sections twenty-eight to fifty-nine, both inclusive, of this chapter and all other laws of the state relating to forest fires to be printed and freely distributed to the selectmen of all the towns of the state, who shall post them up in schoolhouses, saw mills, logging camps and other places; and similar copies shall be furnished to owners of forest lands, who may apply for them, to be posted up at the expense of such owners. Any person viciously or wantonly tearing down, destroying or defacing

any such notices, shall on conviction thereof, be punished by a fine of five dollars.

Sec. 59. Penalties not substitutes for existing liabilities. R. S. c. 7, § 68. None of the penalties imposed by sections thirty-five, fifty-one, fifty-two and fifty-eight shall be considered as substitutes for or as repealing the provisions of existing laws, making persons guilty of acts of trespass or liable for civil damages to persons injured by such acts.

MAINE FORESTRY DISTRICT.

Sec. 60. Maine Forestry District. 1909, c. 193, § 1. The administrative district known as the Maine Forestry District, heretofore established and incorporated, shall include the following territory:

Aroostook county. 1913, c. 68, § 1. Township A, R. 2, W. E. L. S.; Hammond plantation; C, R. 2, W. E. L. S.; D, R. 2, W. E. L. S.; E plantation; 3, R. 2, W. E. L. S.; Cox Patent; Glenwood plantation; 3, R. 3, W. E. L. S.; 4, R. 3, W. E. L. S.; 7, R. 3, W. E. L. S.; 8, R. 3, W. E. L. S.; 9, R. 3, W. E. L. S.; 10, R. 3, W. E. L. S.; 17, R. 3, W. E. L. S.; 1, R. 4, W. E. L. S.; 2, R. 4, W. E. L. S.; 3, R. 4, W. E. L. S.; 7, R. 4, W. E. L. S.; 8, R. 4, W. E. L. S.; 9, R. 4, W. E. L. S.; 10, R. 4, W. E. L. S.; 11, R. 4, W. E. L. S.; Westmanland plantation; 16, R. 4, W. E. L. S.; 17, R. 4, W. E. L. S.; A, R. 5, W. E. L. S.; 1, R. 5, W. E. L. S.; 7, R. 5, W. E. L. S.; 8, R. 5, W. E. L. S.; 9, R. 5, W. E. L. S.; 13, R. 5, W. E. L. S.; 14, R. 5, W. E. L. S.; 15, R. 5, W. E. L. S.; 16, R. 5, W. E. L. S.; 17, R. 5, W. E. L. S.; Oxbow plantation; 10, R. 6, W. E. L. S.; Garfield plantation; Nashville plantation; 14, R. 6, W. E. L. S.; 15, R. 6, W. E. L. S.; 16, R. 6, W. E. L. S.; 9, R. 7, W. E. L. S.; 10, R. 7, W. E. L. S.; 11, R. 7, W. E. L. S.; 12, R. 7, W. E. L. S.; 13, R. 7, W. E. L. S.; 14, R. 7, W. E. L. S.; Winterville plantation; 9, R. 8, W. E. L. S.; 10, R. 8, W. E. L. S.; 11, R. 8, W. E. L. S.; 12, R. 8, W. E. L. S.; 13, R. 8, W. E. L. S.; 14, R. 8, W. E. L. S.; 15, R. 8, W. E. L. S.; 16, R. 8, W. E. L. S.; 11, R. 9, W. E. L. S.; 12, R. 9, W. E. L. S.; 13, R. 9, W. E. L. S.; 14, R. 9, W. E. L. S.; 15, R. 9, W. E. L. S.; 16, R. 9, W. E. L. S.; 11, R. 10, W. E. L. S.; 12, R. 10, W. E. L. S.; 13, R. 10, W. E. L. S.; 14, R. 10, W. E. L. S.; 15, R. 10, W. E. L. S.; Allagash plantation; 18, R. 10, W. E. L. S.; 11, R. 11, W. E. L. S.; 12, R. 11, W. E. L. S.; 13, R. 11, W. E. L. S.; 14, R. 11, W. E. L. S.; 15, R. 11, W. E. L. S.; 18, R. 11, W. E. L. S.; 19, R. 11, W. E. L. S.; 11, R. 12, W. E. L. S.; 12, R. 12, W. E. L. S.; 13, R. 12, W. E. L. S.; 14, R. 12, W. E. L. S.; 15, R. 12, W. E. L. S.; 16, R. 12, W. E. L. S.; 17, R. 12, W. E. L. S.; 18, R. 12, W. E. L. S.; 19, R. 12, W. E. L. S.; 20, R. 11 and 12, W. E. L. S.; 11, R. 13, W. E. L. S.; 12, R. 13, W. E. L. S.; 13, R. 13, W. E. L. S.; 14, R. 13, W. E. L. S.; 15, R. 13, W. E. L. S.; 16, R. 13, W. E. L. S.; 17, R. 13, W. E. L. S.; 18, R. 13, W. E. L. S.; 11, R. 14, W. E. L. S.; 12, R. 14, W. E. L. S.; 13, R. 14, W. E. L. S.; 14, R. 14, W. E. L. S.; 15, R. 14, W. E. L. S.; 16, R. 14, W. E. L. S.;

17, R. 14, W. E. L. S.; 11, R. 15, W. E. L. S.; 12, R. 15, W. E. L. S.; 13, R. 15, W. E. L. S.; 14, R. 15, W. E. L. S.; 15, R. 15, W. E. L. S.; 11, R. 16, W. E. L. S.; 12, R. 16, W. E. L. S.; 13, R. 16, W. E. L. S.; 14, R. 16, W. E. L. S.; 11, R. 17, W. E. L. S.; 12, R. 17, W. E. L. S.; in Aroostook county.

Franklin county. Township Number 4, Washington plantation; Sandy River plantation; Rangeley plantation; 4, R. 1, B. K. P., W. K. R.; 4, R. 2, B. K. P., W. K. R.; 4, R. 3, B. K. P., W. K. R.; D, R. 1; 1, R. 2, W. B. K. P.; Dallas plantation; Coplin plantation; Lang plantation; 3, R. 3, W. B. K. P.; 3, R. 2, B. K. P., W. K. R.; 2, R. 4, W. B. K. P.; 3, R. 4, W. B. K. P.; 1, R. 5, W. B. K. P.; 2, R. 5, W. B. K. P.; 3, R. 5, W. B. K. P.; 1, R. 6, W. B. K. P.; 2, R. 6, W. B. K. P.; 3, R. 6, W. B. K. P.; 1, R. 7, W. B. K. P.; 2, R. 7, W. B. K. P.; 1, R. 8, W. B. K. P.; 2, R. 8, W. B. K. P.; Gore north of T. number 2 and 3, R. 6, W. B. K. P.; number 6 north of Weld; Gore north of T. 1, R. 8, W. B. K. P.; township E; Perkins; in Franklin county.

Hancock county. Township No. 3, North Division; No. 4, North Division; Two Mile Strip North of No. 3, North Division; Strip North of No. 4, North Division; No. 7, South Division; No. 8, Plantation; No. 9, South Division; No. 10, South Division; No. 16 Middle Division; No. 21, Plantation; No. 22, Middle Division; No. 28, Middle Division; No. 32, Middle Division; No. 33, Plantation; No. 34, Middle Division; number 35, Middle Division; number 39, Middle Division; number 40, Middle Division; number 41, Middle Division; Butter Island; Eagle Island; Spruce Head Island; Bear Island; Beach Island; Hog Island; Bradbury's Island; Pond Island; Western Island; Little Spruce Island; Marshall's Island; Pickering's Island; in Hancock county.

Oxford county. 1913, c. 68, § 1. T. A, number 1; Andover North Surplus; Andover West Surplus; T. C.; C Surplus; 4, R. 1, W. B. K. P.; Magalloway plantation; 4, R. 2, W. B. K. P.; Lincoln plantation; 4, R. 3, W. B. K. P.; 5, R. 3, W. B. K. P.; 4, R. 4, W. B. K. P.; 5, R. 4, W. B. K. P.; 4, R. 5, W. B. K. P.; 4, R. 6, W. B. K. P.; 5, R. 5, W. B. K. P.; Batchelder's Grant; in Oxford county.

Penobscot county. Township 3, R. 1, N. B. P. P.; Lakeville plantation; 5, R. 1, N. B. P. P.; Webster plantation; Drew plantation; 1, R. 7, N. W. P.; 2, R. 8, N. W. P.; Sebocis plantation; 2, R. 9, N. W. P.; 3, R. 9, N. W. P.; 1, R. 6, W. E. L. S.; 2, R. 6, W. E. L. S.; Stacyville plantation; 6, R. 6, W. E. L. S.; 7, R. 6, W. E. L. S.; 8, R. 6, W. E. L. S.; A, R. 7, W. E. L. S.; 1, R. 7, W. E. L. S.; 2, R. 7, W. E. L. S.; 3, R. 7, W. E. L. S.; 4, R. 7, W. E. L. S.; 5, R. 7, W. E. L. S.; 6, R. 7, W. E. L. S.; 7, R. 7, W. E. L. S.; 8, R. 7, W. E. L. S.; Hopkins Academy grant; 8, R. 8, W. E. L. S.; A, R. 8 and 9, W. E. L. S.; Veazie Gore; number 3, Indian purchase; number 4, Indian purchase; 1, R. 8, W. E. L. S.; 2, R. 8, W. E. L. S.; 3, R. 8, W. E. L. S.; 4, R. 8, W. E. L. S.; 5, R. 8, W. E. L. S.; 6, R. 8, W. E. L. S.; 7, R. 8, W. E. L. S.; number 1, North Division; Grand Falls plantation; in Penobscot county.

Piscataquis county. 1913, c. 68, §§ 1, 2. Lakeview plantation; Barnard plantation; 4, R. 9, N. W. P.; 5, R. 9, N. W. P.; 6, R. 9, N. W. P.; 7, R. 9, N. W. P.; Elliottsville plantation; 3, R. 5, B. K. P., E. K. R.; 2, R. 6, B. K. P., E. K. R.; 1, R. 9, W. E. L. S.; 2, R. 9, W. E. L. S.; 3, R. 9, W. E. L. S.; 4, R. 9, W. E. L. S.; 5, R. 9, W. E. L. S.; 6, R. 9, W. E. L. S.; 7, R. 9, W. E. L. S.; 8, R. 9, W. E. L. S.; 9, R. 9, W. E. L. S.; 10, R. 9, W. E. L. S.; A, R. 10, W. E. L. S.; B, R. 10, W. E. L. S.; 1, R. 10, W. E. L. S.; 2, R. 10, W. E. L. S.; 3, R. 10, W. E. L. S.; 4, R. 10, W. E. L. S.; 5, R. 10, W. E. L. S.; 6, R. 10, W. E. L. S.; 7, R. 10, W. E. L. S.; 8, R. 10, W. E. L. S.; 9, R. 10, W. E. L. S.; 10, R. 10, W. E. L. S.; A, R. 11, W. E. L. S.; B, R. 11, W. E. L. S.; 1, R. 11, W. E. L. S.; 2, R. 11, W. E. L. S.; 3, R. 11, W. E. L. S.; 4, R. 11, W. E. L. S.; 5, R. 11, W. E. L. S.; 6, R. 11, W. E. L. S.; 7, R. 11, W. E. L. S.; 8, R. 11, W. E. L. S.; 9, R. 11, W. E. L. S.; 10, R. 11, W. E. L. S.; 7, R. 10, N. W. P.; 8, R. 10, N. W. P.; A, R. 12, W. E. L. S.; 1, R. 12, W. E. L. S.; 2, R. 12, W. E. L. S.; 3, R. 12, W. E. L. S.; 4, R. 12, W. E. L. S.; 5, R. 12, W. E. L. S.; 6, R. 12, W. E. L. S.; 7, R. 12, W. E. L. S.; 8, R. 12, W. E. L. S.; 9, R. 12, W. E. L. S.; 10, R. 12, W. E. L. S.; A, R. 13, W. E. L. S.; A 2, R. 13 and 14, W. E. L. S.; 1, R. 13, W. E. L. S.; 2, R. 13, W. E. L. S.; 3, R. 13, W. E. L. S.; 4, R. 13, W. E. L. S.; 5, R. 13, W. E. L. S.; 6, R. 13, W. E. L. S.; 7, R. 13, W. E. L. S.; 8, R. 13, W. E. L. S.; 9, R. 13, W. E. L. S.; 10, R. 13, W. E. L. S.; A, R. 14, W. E. L. S.; X, R. 14, W. E. L. S.; 3, R. 14, and 15, W. E. L. S.; 1, R. 14, W. E. L. S.; 4, R. 14, W. E. L. S.; 5, R. 14, W. E. L. S.; 6, R. 14, W. E. L. S.; 7, R. 14, W. E. L. S.; 8, R. 14, W. E. L. S.; 9, R. 14, W. E. L. S.; 10, R. 14, W. E. L. S.; Sugar Island; Deer Island; Middlesex canal; Day's academy; 4, R. 15, W. E. L. S.; 5, R. 15, W. E. L. S.; 6, R. 15, W. E. L. S.; 7, R. 15, W. E. L. S.; 8, R. 15, W. E. L. S.; 9, R. 15, W. E. L. S.; 10, R. 15, W. E. L. S.; Moose Island; Farm Island; Kingsbury plantation; in Piscataquis county

Somerset county. Lexington plantation; Pleasant Ridge plantation; Highland plantation; 1, R. 3, B. K. P., W. K. R.; 2, R. 3, B. K. P., W. K. R.; Dead River plantation; Bigelow plantation; 1, R. 4, B. K. P., W. K. R.; 2, R. 4, B. K. P., W. K. R.; 3, R. 4, B. K. P., W. K. R.; Flagstaff plantation; West Forks plantation; 2, R. 5, B. K. P., W. K. R.; 3, R. 5, B. K. P., W. K. R.; 4, R. 5, B. K. P., W. K. R.; 1, R. 6, B. K. P., W. K. R.; 2, R. 6, B. K. P., W. K. R.; 3, R. 6, B. K. P., W. K. R.; 4, R. 6, B. K. P., W. K. R.; 5, R. 6, B. K. P., W. K. R.; 1, R. 7, B. K. P., W. K. R.; 2, R. 7, B. K. P., W. K. R.; 3, R. 7, B. K. P., W. K. R.; 4, R. 7, B. K. P., W. K. R.; 5, R. 7, B. K. P., W. K. R.; 6, R. 7, B. K. P., W. K. R.; Gore North of numbers 1, 2 and 3, R. 7, B. K. P., W. K. R.; Mayfield plantation; 2, R. 3, B. K. P., E. K. R.; The Forks plantation; 2, R. 4, B. K. P., E. K. R.; 1, R. 5, B. K. P., E. K. R.; 2, R. 5, B. K. P., E. K. R.; 1, R. 6, B. K. P., E. K. R.; 1, R. 1, N. B. K. P.; 2, R. 1, N. B. K. P.; 3, R. 1, N. B. K. P.; Jackman plantation; 5, R. 1, N. B. K. P.; 6, R. 1, N. B. K. P.; 1, R. 2, N. B. K. P.;

2, R. 2, N. B. K. P.; 3, R. 2, N. B. K. P.; Moose River plantation; Dennistown plantation; 6, R. 2, N. B. K. P.; Big W, N. B. K. P.; Little W, N. B. K. P.; 1, R. 3, N. B. K. P.; 2, R. 3, N. B. K. P.; 3, R. 3, N. B. K. P.; 4, R. 3, N. B. K. P.; 5, R. 3, N. B. K. P.; Seboomook; 1, R. 4, N. B. K. P.; 2, R. 4, N. B. K. P.; 3, R. 4, N. B. K. P.; 4, R. 4, N. B. K. P.; 5, R. 4, N. B. K. P.; 3, R. 5, N. B. K. P.; 4, R. 5, N. B. K. P.; 4, R. 16, W. E. L. S.; 5, R. 16, W. E. L. S.; 6, R. 16, W. E. L. S.; 7, R. 16, W. E. L. S.; 8, R. 16, W. E. L. S.; 9, R. 16, W. E. L. S.; 10, R. 16, W. E. L. S.; 4, R. 17, W. E. L. S.; 5, R. 17, W. E. L. S.; 6, R. 17, W. E. L. S.; 7, R. 17, W. E. L. S.; 8, R. 17, W. E. L. S.; 9, R. 17, W. E. L. S.; 10, R. 17, W. E. L. S.; 4, R. 18, W. E. L. S.; 5, R. 18, W. E. L. S.; 6, R. 18, W. E. L. S.; 7, R. 18, W. E. L. S.; 8, R. 18, W. E. L. S.; 9, R. 18, W. E. L. S.; 5, R. 19, W. E. L. S.; 6, R. 19, W. E. L. S.; 7, R. 19, W. E. L. S.; 8, R. 19, W. E. L. S.; 5, R. 20, W. E. L. S.; in Smerset county.

Washington county. Township number 18, east division; number 19, east division; number 26, east division; number 27, east division; number 18, middle division; number 19, middle division; number 24, middle division; number 25, middle division; number 29, middle division; number 30, middle division; number 31, middle division; number 36, middle division; number 37, middle division; number 42, middle division; number 43, middle division; number 5, north division; strip north of number 5, north division; number 6, north division; strip north of number 6, north division; number 1, R. 1, Titcomb's survey; Grand Lake Stream plantation; 1, R. 2, Titcomb's survey; 1, R. 3, Titcomb's survey; 6, R. 1, N. B. P. P.; 7, R. 2, N. B. P. P.; 8, R. 3, N. B. P. P.; 10, R. 3, N. B. P. P.; 11, R. 3, N. B. P. P.; 8, R. 4, N. B. P. P.; Indian township; Codyville plantation; number 14 plantation; number 21 plantation; in Washington county.

Sec. 61. Annual tax assessed; when payable; description of property. 1909, c. 193, § 2. An annual tax of one and one-half mills on the dollar is hereby assessed upon all the property in said district, including rights in public lots, to be used for the protection thereof. Said tax shall be due and payable at the date of the assessment of the state tax, in the years when the legislature is in session, and for other years it shall be due and payable in one year after the date of such assessment. The valuation as determined by the board of state assessors, and set forth in the statement filed by them as provided in section eleven of chapter nine, shall be the basis for the computation and apportionment of the tax hereby assessed. The tax hereby assessed shall be valid, and all remedies herein provided shall be in full force if said property is described with reasonable accuracy, whether the ownership thereof is correctly stated or not.

Sec. 62. State assessors shall file description of land subject to tax. 1909, c. 193, § 3. The board of state assessors shall, within thirty days after such tax is due, prepare and file with the treasurer of state, a cer-

tificate setting forth the description of each lot, parcel or right subject to the tax, together with the tax computed at the rate fixed in the preceding section.

Sec. 63. Lists of assessments to be advertised; land held to the state for payment of tax. 1909, c. 193, § 4. The treasurer of state shall cause lists of the assessments made hereby to be advertised for three weeks successively in the state paper, and in some newspaper, if any, in the county where the land lies, within three months after such tax is due. Such advertisement may be consolidated with the advertisement required by section forty-four of chapter ten.

The land shall be held to the state for the payment of the tax so assessed, with interest at twenty per cent per annum, to commence six months after such tax is due as herein provided.

109 Me. 477.

Sec. 64. Redemption of lands assessed and advertised, proceedings; land forfeited to the state. 1909, c. 193, § 5. Owners of lands so assessed and advertised may redeem them by paying to the treasurer of state the tax with interest thereon, within one year from the time when such interest commences. Each owner may pay for his interest in any tract, whether in common or not, and upon filing with the treasurer of state a certificate showing the number of acres, and describing the property on which he desires to pay the tax, and where the same is located, and paying the amount due, shall receive a certificate from the treasurer of state, discharging the tax on the number of acres or interest upon which such payment is made. Each part or interest of every such township or tract upon which the tax hereby imposed and so advertised is not paid, with interest, within the time limited in this section for such redemption, shall be wholly forfeited to the state and vest therein free of any claim by any former owner.

109 Me. 477.

Sec. 65. Assessment of taxes on organized plantations. 1911, c. 33. The treasurer of state shall annually send his warrant, together with a copy of the assessment of taxes upon the organized plantations in the Maine Forestry District, directed to the municipal officers of said plantations, requiring them respectively to assess, in dollars and cents, the sum so charged, according to the provisions of law for the assessment of such taxes, and to add to the amount of such tax the amount of state, county and plantation taxes, to be by them assessed in each plantation respectively.

Sec. 66. Use of funds; when insufficient, payments from state treasury; audit of accounts. 1909, c. 193, § 6. 1913, c. 85, § 1. The tax assessed by authority of section sixty-one shall be held by the treasurer of state as a fund to be used to protect from fire the forests situated upon and within the district, and to pay expenses incidental thereto and for no other purpose. The governor and council shall from time to time, as the forest commissioner may request, issue their warrant to the treasurer of state to pay to said commissioner such sums of money

as said commissioner may deem necessary for the purpose aforesaid. If the tax assessed by authority of section sixty-one has not been collected or for any reason is not available for the purpose aforesaid or if said tax proves insufficient in any year to properly carry out said purpose, the governor and council may issue their warrant to the treasurer of state, authorizing him to advance and pay to the forest commissioner, from any moneys then in the treasury not otherwise appropriated, such sum or sums of money as they may deem necessary for such purpose. The accounts of the commissioner of the disbursement of all funds shall be examined by the state auditor for the purpose of determining if said accounts are correctly kept and all payments properly vouched for. The forest commissioner may employ from time to time such clerks in his office as will enable him to pay promptly all bills contracted in carrying out the provisions hereof and the compensation of such clerks shall be paid from the funds provided for the district.

109 Me. 472.

Sec. 67. Prevention, control and extinguishment of fires; lookout stations. 1909, c. 193, § 7. The forest commissioner shall take measures for the prevention, control and extinguishment of forest fires in said forestry district, and to this end he shall establish such sub-forestry districts as he may deem necessary for effective protection against loss or damage by fire. He may establish lookout stations connected by telephone and equip and maintain depots for necessary tools for the extinguishment of forest fires.

Sec. 68. Chief forest fire warden; deputy forest fire wardens; tenure. 1909, c. 193, § 8. He shall appoint in and for each of the districts so established, a chief forest fire warden, and such number of deputy forest fire wardens as in his judgment may be required to carry out the provisions of sections sixty to seventy-three, both inclusive, assigning to each of the latter the territory over and within which he shall have jurisdiction. All chief and deputy forest fire wardens, so appointed, shall hold office during the pleasure of the commissioner; they shall be sworn to the faithful discharge of their duties, and a certificate thereof shall be returned to the office of the commissioner.

Sec. 69. Duties of fire wardens and deputy wardens; employment of assistants. 1909, c. 193, § 9. 1913, c. 85, § 2. The chief forest fire wardens, under the direction of the commissioner, shall have general supervision of their respective districts and of the deputy forest fire wardens therein. Each chief forest fire warden, when directed by the commissioner, shall patrol the forests of his district for the purpose of searching out, extinguishing and guarding against forest fires. He shall investigate and gather evidence regarding the causes of forest fires, enforce all laws relating to forests and forest preservation, arrest all violators thereof, prosecute all offences against the same, and in this connection shall have the same power to serve criminal processes against such offenders and shall be allowed the same fee as a sheriff, or his deputy, for like services, and shall have and enjoy the same right as a

sheriff to require aid in executing the duties of his office. The chief forest fire wardens shall perform such other duties, at such times, and under such rules and regulations, as the said commissioner may prescribe, and each shall receive as compensation three dollars for each and every day of actual service, with an allowance for actual necessary expenses of travel and subsistence. The commissioner may authorize the employment of suitable persons to assist the chief forest fire wardens in patrolling their respective districts and every person so employed shall be paid twenty cents for each hour of service so rendered by him and be provided with subsistence during such period. Deputy forest fire wardens shall perform such duties, at such times and under such rules and regulations, as the commissioner, or the chief fire warden of the district, with the approval of the commissioner, may prescribe and they shall receive as compensation two dollars and actual necessary expenses for each and every day of actual service.

Sec. 70. Chief and deputy fire wardens shall take immediate action to control fires; may summon assistance; deputy wardens shall render account of expense; chief warden shall make detailed report. 1909, c. 193, § 10. 1913, c. 85, § 3. Whenever a fire occurs on, or is likely to do damage to forest lands within the district of any chief forest fire warden, he shall take immediate action to control and extinguish the same. If such fire occurs upon or is likely to do damage to forest lands within the territory of a deputy forest fire warden and the chief fire warden of the district is not present, the deputy forest fire warden having jurisdiction of the territory shall forthwith proceed to control and extinguish the same, and he shall meanwhile, with all consistent dispatch, cause the said chief fire warden of the district to be notified of the occurrence of such fire. Until the arrival of the chief warden at the place of fire, the deputy warden shall be in charge of the control and extinguishment of the same. For the purpose of controlling and extinguishing fires, chief forest fire wardens, and deputy forest fire wardens, when in charge of the control and extinguishment of forest fires or when so directed by the chief warden, may summon to their assistance any person found within the state and each person so summoned and assisting shall be paid twenty cents for each hour of service rendered by him and be provided with subsistence during such service. Immediately after the extinguishment of a fire, the deputy forest fire warden who for any time may have been in charge of the same, shall make return to the chief warden of the district of the expense thereof during the period of his being in charge, including the names of the persons so summoned and assisting, with their post-office addresses and the hours of labor actually performed by each under his direction. The return shall be made upon oath and the chief warden is hereby authorized and empowered to administer such oath. Upon receipt of such return, the chief fire warden shall carefully examine and audit the same, and he may direct the deputy to amend and correct any return found to be incomplete, incorrect, or insufficient in form. If upon ex-

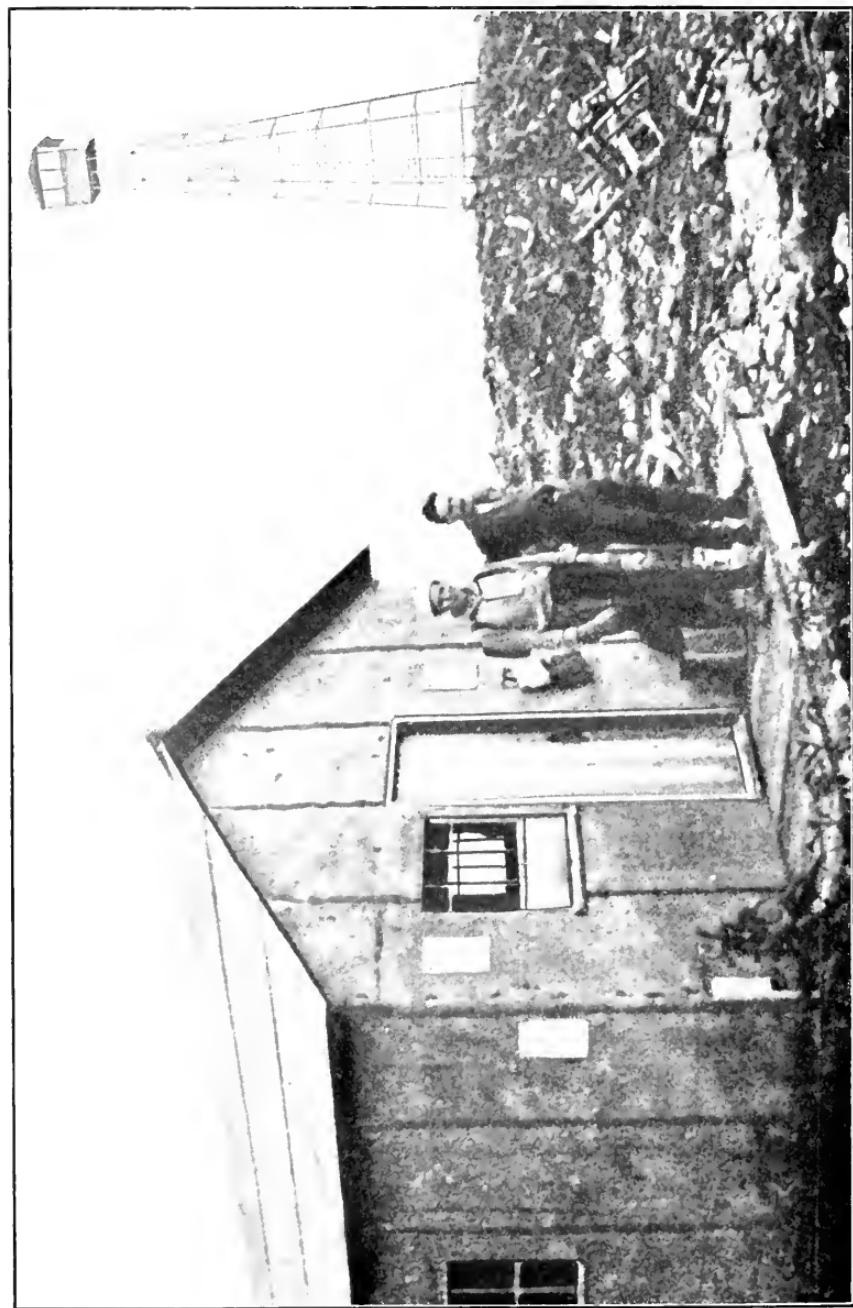
amination and auditing of said return, and investigation of the subject matter thereof, the chief fire warden believes said return to be just and correct, he shall endorse his written approval thereon and forward the same so approved to the forest commissioner. The chief fire warden of every district burned by a forest fire shall, upon the extinguishment of such fire, promptly forward an extract and detailed statement of the expense, if any, which he may have incurred in connection with the extinguishment of such fire, to the forest commissioner, who may confirm, reject or recommit, either or both, the approved return of said deputy or the detailed statement of the chief fire warden, if justice so requires.

Sec. 71. Expenses, how paid. 1909, c. 193, § 11. All expenses incurred under the provisions of sections sixty to seventy-three, both inclusive, shall be paid from the funds raised and created by the tax assessed under the provisions of section sixty-one.

Sec. 72. Appropriation. 1909, c. 193, § 13. So much of the funds raised by the tax hereby imposed and paid into the treasury, as may be necessary to pay the claims, accounts and demands arising under the provisions of the twelve preceding sections, is hereby appropriated to pay the same, and the governor and council may draw their warrants therefor at any time. Any balance remaining unpaid shall continue from year to year as a fund available for the purpose defined in section sixty-six.

Sec. 73. Any adjacent town or plantation may become part of forestry district. 1913, c. 204. Any incorporated town or organized plantation adjoining any part of the Maine forestry district may by vote at any meeting of its inhabitants duly called and held, become a part of said forestry district and subject to all the provisions of the thirteen preceding sections. A copy of such vote certified by the town clerk or plantation assessors, shall be forwarded forthwith to the treasurer of state and to the forest commissioner, and from the time such certified copy is filed in the office of the treasurer of state, the town or plantation so voting shall be and continue a part of said forestry district. All incorporated towns or organized plantations which shall become a part of said district and all officers of such towns or plantations shall be and are exempt from the duties and obligations imposed by sections twenty-nine and thirty-six of this chapter.

1915



Watchman's camp, built in 1916, and tower on Kibbe Mt., Twp. 1, R. 6, W. B. K. P. Franklin Co.

PUBLIC LANDS-1915.

STUMPPAGE PERMITS ON PUBLIC LOTS.

On stumppage permits let for the winter 1914-15 on Reserved lots; for rental of camp sites, etc., for the year 1915 and for trespasses committed during 1915 the following amounts have been collected and turned in to the State Treasurer to the credit of the Reserved Land School Fund of the following townships and plantations:

3, R. 2, W. E. L. S. Aroostook	\$3 00
16, R. 10, W. E. L. S., Aroostook	190 38
17, R. 10, W. E. L. S., Aroostook	365 71
16, R. 11, W. E. L. S., Aroostook	199 12
17, R. 11, W. E. L. S., Aroostook	121 60
Glenwood Pl., Aroostook	56 10
Macwalhoc Pl., Aroostook	2,636 99
Nashville Pl., Aroostook	3,927 17
Oxbow Pl., Aroostook	5 00
St. John Pl., Aroostook	1,657 78
Silver Ridge Pl., Aroostook	209 87
3, R. 3, W. B. K. P., Franklin	200 00
3, R. 4, W. B. K. P., Franklin	90 00
4, R. 2, W. B. K. P., Oxford	100 00
Magalloway Pl., Oxford	12,902 11
5, R. 8, W. E. L. S., Penobscot	10 00
Grand Falls Pl., Penobscot	1,168 70
Stacyville Pl., Penobscot	75 76
Elliottsville Pl., Piscataquis	3,334 65
Bigelow Pl., Somerset	607 18
Caratunk Pl., Somerset	20 00
Dead River Pl., Somerset	5 00
Flagstaff Pl., Somerset	376 78
Highland Pl., Somerset	2,869 14
The Forks Pl., Somerset	29 50

West Forks Pl., Somerset	2,116	77
Grand Lake Stream Pl., Washington	5,871	88
No. 21 Pl., Washington	293	71
		\$39,443 90

TRESPASS ON PUBLIC LOTS.

During the year 1915 I have made a very diligent inquiry into all trespasses on the Public Lots. Due settlement has been effected in every case with the exception of one, (Stacyville), over which a dispute has arisen in the scale and the proceeds deposited with the State Treasurer to the credit of the Township or Plantation. Trespasses occurred on the reserved lots of the following townships: Indian Township; 3, R. 2, W. E. L. S., Aroostook; Stacyville Plantation; Glenwood Plantation; Flagstaff Plantation; Silver Ridge Plantation, Highland Plantation and Grand Falls Plantation. In the majority of cases the trespass was clearly a mistake.

INDIAN TOWNSHIP.

This township is the only remaining one in which the title is still invested in the State. The Land Agent has custody of the same and is represented locally by a sub-agent; Mr. James Swan, Princeton, is at present the sub-agent. From the proceeds of the lumbering in the winter of 1914-15 and from miscellaneous receipts of the sub-agent, a total of \$5,254.26 has been collected and credited to the Passamaquoddy Indian fund as is by law provided. During the year, I have personally visited the township three times on various matters and for the winter of 1915-16 have granted two permits which will undoubtedly net larger returns than those of this year.

SALE OF ISLANDS.

There is still much doubt as to the title to many of the small islands in our inland lakes and ponds. Many are claimed by the nearest adjoining landowners but it is very doubtful if the acreage of the original grants and deeds included these small islands where such deed or grant does not specify the island. It is very evident that a test case should be made and a decision reached in this matter.

In 1915, the title to Potato Island in the town of Harrington was cleared by the State in consideration of One dollar. Nichatou Island in the Penobscot River in the town of Medway was sold for two hundred dollars. Both of these transfers were made under the direction of the Governor and Council.

RETRACING AND DEFINING LINES AROUND RESERVED LOTS.

In permitting the timber on the reserved lots of No. 21 Plantation, Hancock, it became evident that the exterior lines must be re-established. This was accordingly done under the direction of Surveyor, Ira B. Hagan of Ellsworth and the Assessors of the Plantation. A report of same is on file in this office.

During the latter part of the year a dispute arose regarding the south line of the Public Lot of Magalloway Plantation. I endeavored to get a competent surveyor to resurvey this lot before the end of the year but was unable to. This will be done the first of the year as I have secured the services of W. H. Jenne of South Paris in the matter.

PLANTATIONS INCORPORATED AS TOWNS.

Under the provisions of Chap. 54 of the P. and S. Laws of 1915, Chapman Plantation, Aroostook county, has been organized as a town. By this incorporation the State loses its interest in the Public Lots of this town and the Reserved Land School Fund to the credit of Chapman on the books of the State Treasurer is payable to the Town Treasurer as a permanent school fund for the town.

MISCELLANEOUS RECEIPTS.

During the year, I have transmitted to the State Treasurer the following receipts:

Fees received for field notes, plans, etc.....	\$50 50
Interest on deposits	99 39
<hr/> Total	\$149 89

STUMPPAGE PERMITS, WINTER OF 1915-16.

I have granted fifteen permits on the Public Lots of different Plantations for the winter 1915-16. In each case I have seen to it that only responsible operators secured them and have also carefully considered the growth, etc., in each case that the future benefits of same may be realized by the inhabitants of the respective townships or plantations.

MAINE FORESTRY DISTRICT-1915.

Financial Statement.

RECEIPTS.

Balance January 1st, 1915	\$11 06
1915 Assessment less abatement (\$6.96)	73.329 08
Interest on Deposits	56 49
Reimbursement from railroads for patrols and other miscellaneous income	883 73
<hr/>	
Total receipts	\$74,280 36

EXPENDITURES.

1914 Bills paid in 1915	\$4,448 19
Ten tons fire extinguisher—paid March 6, 1915	1,960 00
Expense of fire protection during season of 1915 (For detail see Watershed expense)	52,006 66
<hr/>	
Balance January 1st, 1916..	\$15,865 51

Including the 1914 bills, all proper bills for 1915 that have been received at the office have been paid and a balance brought over for 1916 work amounting to \$15,865.51.

Watershed Expense-1915.

WATERSHED.	St. John River.	Penobscot River.	Kennebec River.	Androscoggin River.	Narraguagus, Union, St. Croix Machias.	Totals.
Chief wardens.....	\$3,692 00	\$4,303 40	\$869 89	\$108 77	\$565 63	\$9,539 69
Deputy wardens....	30 01	111 88	31 25	15 50	113 50	302 14
Lookout expense....	2,449 92	4,410 85	4,010 46	542 15	1,718 48	13,131 86
Patrol expense.....	9,256 67	7,749 79	465 00	290 00	362 00	18,123 46
Fire expense.....	386 46	4,996 81	1,203 88	1,123 95	1,977 83	9,688 93
Tools and supplies.....	277 27	875 07	499 58	19 15	284 78	1,955 85
Administration charges.....	1,772 70	1,432 15	819 84	279 35	485 15	4,789 19
Totals.....	\$17,865 03	\$23,879 95	\$7,899 90	\$2,378 87	\$5,507 37	\$57,531 12
Cost.						
Fire fighting per acre.....	\$.00011	\$.00182	\$.00076	\$.0021	\$.00213	.....
Protection per acre	.00516	.0069	.00427	.00235	.0038	.....
Total per acre.....	\$.00527	\$.00872	\$.00503	\$.00445	\$.00593	.....

NOTE.—The total of the 1915 apportionment includes all expenditures for the year including the 1914 bills, amounting to..... \$58,414 85
 Less credits received (see financial statement)..... 883 73
 _____ \$57,531 12

Lookout Service, 1915.

A total of fifty-one stations were maintained through the fire season of 1915. The absence of snow in the woods and the dry period that existed as early as March necessitated the running of stations in Washington and Hancock counties in the month of March—a very unusual occurrence. From the 15th of April to the 15th of July it was necessary to run the full number of stations as very dry conditions existed. From the first of July a very wet summer followed and the men on certain stations were laid off from time to time as conditions demanded. All watchmen were permanently laid off for the season on September 30th. It was not found practicable to maintain the stations on Trout Brook Mountain, Twp. 5, R. 10, Piscataquis county; Lawler Hill, Benedicta; Almanac Mt., Lakeville Plantation; and Sourdnahunk Mt., 1, R. 11, W. E. L. S., Piscataquis county.

Lookout Stations Operated	Fires reported by same.
No. 1. Lead Mt. Twp. 28, Hancock County	1
No. 2. Pleasant Pond Mt., Caratunk Pl.....	1
No. 3. Attean Mt., Attean Twp., Somerset County ...	7
No. 4. Tumbledown Mt., Twp. 5, R. 6, W. K. R.....	0
No. 5. Squaw Mt., Twp. 2, R. 6, B. K. P., Piscataquis County	6
No. 6. Snow Mt. Twp. 2, R. 5, Franklin County	4
No. 7. Mt. Bigelow, Bigelow Twp., Somerset County	9
No. 8. White Cap Mt., 7, R. 10, N. W. P., East Bowdoin College Twp.....	14
No. 9. Spencer Mt., Middlesex Grant, Piscataquis County	9
No. 10. Rocky Mt., So. part Twp. 18, R. 12, W. E. L. S.	6
No. 12. Otter Lake Mt., Twp. 3, R. 4, W. E. L. S.....	3
No. 13. Mt. Chase, Twp. 5, R. 6, W. E. L. S.....	5
No. 14. Ragged Mt. Twp. A, R. 9, W. E. L. S.....	10
No. 15. Mt. Kineo, Moosehead Lake	8
No. 16. Mt. Coburn, Twp. 3, R. 6, B. K. P., W. K. R..	5
No. 17. Wesley Mt., Wesley, Washington Co.....	13
No. 18. Depot Mt., Twp. 14, R. 16, W. E. L. S.....	13
No. 19. Soper Mt., Twp. S, R. 12, W. E. L. S.....	1
No. 20. Round Mt., Twp. 11, R. 8, W. E. L. S.....	6
No. 21. Aziscoos Mt., Lincoln Pl., Oxford County....	2
No. 22. Mt. Katahdin, Twp. 3, R. 9, W. E. L. S.....	3
No. 23. Bald Mt., Twp. 2, R. 3, E. K. R.....	5
No. 24. Kibbie Mt., Twp. 1, R. 6, W. B. K. P.....	4
No. 25. Priestly Mt., Twp. 10, R. 13, W. E. L. S.....	6
No. 26. Boundary Bald Mt., Twp. 4, R. 3, N. B. K. P..	4
No. 27. Williams Mt., Twp. 2, R. 7, B. K. P., W. K. R.	19
No. 28. West Kennebago Mt., Twp. 4, R. 4, W. B. K. P.	7
No. 29. Lily Bay Mt., A, R. 14, W. E. L. S., Piscataquis County	3
No. 30. Cobb Mt., Lee, Penobscot County	2
No. 31. Taylor Hill, Princeton, Washington County...	6
No. 32. Tug Mt., Twp. XXX, M. D.....	0
No. 33. Beeetle Mt., Twp. 7, R. 10, W. E. L. S.....	5
No. 34. Mattagamon Mt., T. 6, R. 8, W. E. L. S.....	8

Lookout Stations Operated	Fires reported by same.
No. 35. Boarstone Mt., Twp. 8, R. 9, N. W. P., Elliottsville	2
No. 36. Joe Mary Mt., A, R. 10, W. E. L. S.....	5
No. 37. Cooper Mt., Cooper, Washington County	19
No. 38. Musquash Mt., Topsfield, Washington County	7
No. 39. Green Mt., Twp. 4, R. 18, W. E. L. S.....	1
No. 40. Mucalsea Mt., Twp. 5, R. 16, W. E. L. S.....	11
No. 41. Saddleback Mt., Twp. 2, R. 1, Franklin County	16
No. 42. Double Top Mt., Twp. 4, R. 10, W. E. L. S...	0
No. 43. Nulhedus Mt., Twp. 5, R. 17, W. E. L. S.....	2
No. 45. Norway Bluff, Twp. 9, R. 9, W. E. L. S.....	5
No. 46. No. 9 Mt., Twp. 9, R. 3, W. E. L. S.....	1
No. 47. Hedgehog Mt., Twp. 14, R. 6, W. E. L. S....	4
No. 48. Three Brooks Mt., Twp. 15, R. 6, W. E. L. S..	5
No. 49. Speckles Mt., Grafton, Oxford County	0
No. 51. Mattamiscontis Mt., Twp. 3, R. 9, N. W. P....	7
No. 52. Haystack Mt., Twp. 11, R. 4, W. E. L. S.....	4
No. 53. Schoodic Mt., Twp. No 9, Hancock County	2
No. 54. Hardwood Mt., Twp. 9, R. 18, Somerset County	0
Total	286

1915 Patrols.

One hundred and seven patrolmen were commissioned for service during the fire season of 1915. In addition to these there were several deputy wardens who did patrol duty in emergency cases.

Up to the first of July, the full force of patrolmen were necessary as the woods were very dry. With the heavy rains of the summer the men were laid off as conditions prompted. All men were finally retired for the season on September 30th.

During the wet periods, men who were on duty accomplished much in the way of construction and repair of telephone lines, clearing and making trails and building and improving camps, tool boxes, etc.

A total of eighty-eight fires were reported as discovered by patrolmen. Apportioned as to watersheds the result of fires discovered by patrolmen is as follows:

Watershed.	Average number of Patrolmen. 1916.	Average Fires Discovered. Per Man.
St. John	48	.12
Penobscot	36	.69
Kennebec	12	.25
Androscoggin	5	.80
Union, Machias, Narra- guagus & St. Croix	6	.33
	107	88

1915 Railroad Patrol.

MAINE CENTRAL RAILROAD.

The regular chief wardens of the Department in addition to their regular territory were also commissioned as Chief Wardens along the rights of way of this railroad within their territory in the Maine Forestry District.

A total of twenty-six men from the various section crews were commissioned as patrolmen and maintained a very efficient patrol during danger periods. The expense of same was borne entirely by the railroad.

BANGOR AND AROOSTOOK RAILROAD.

Leroy Haley of Glenburn was appointed chief warden along the right of way from Milo Junction to Oakfield Junction in the Maine Forestry District and H. B. Stimpson of Houlton for territory north of Oakfield Junction. The Department was reimbursed the sum of \$148.03 by the railroad for the time and expenses of these men while actually employed through the summer.

Thirty patrolmen from the Company's section crews were commissioned and were equipped with velocipede cars by the Company.

CANADIAN PACIFIC RAILROAD.

Chas. Powers, the Master Mechanic, of this road with headquarters at Brownville was appointed Chief Warden over the

entire right of way of this company in the State. Four patrolmen equipped with gasoline speeders maintained a patrol on the company's tracks in the State at the company's expense.

SANDY RIVER AND RANGELEY LAKES RAILROAD.

The chief warden service of this road was handled in the same way as the Maine Central. Nine Patrolmen were maintained by the company.

1915 Federal Cooperation.

In the spring of 1915, I entered into a new contract with the Forest Service, U. S. Department of Agriculture for cooperative protective work in the Maine Forestry District under the provisions of the Weeks Law.

Under this new contract, all of the Maine Forestry District was included in the cooperative area under a revised construction, by the Federal Government, on the terms of the law concerning navigability.

I was required to submit a tentative budget showing the proposed expenditure for the summer's work, classified as to the different branches and divisions of the Department. The contract provided that the Federal Department should take over the expense of watchmen and patrolmen when the apportionment for same as provided by the budget should be expended.

This did not work out to the best advantage of the State as from the weather conditions it was impossible to get the full allotment. I secured Federal pay for watchmen and patrolmen beginning September 1st. With the heavy rains of the early fall, it was not found necessary to keep any of the men on after September 30th and as a result, out of the \$6,500 allotted to Maine within the Maine Forestry District by the Forest Service, the sum of \$5,092.08 was received. During the month of September there were 41 watchmen and 61 patrolmen maintained either whole or part time at Federal expense.

Following is a statement showing the Federal expenditure for the season of 1915 classified as to the branch of service and watershed:

	Watchmen.	Patrolmen	Total.
Penobscot	\$720 00	\$975 58	\$1,695 58
St. John	469 50	1,485 75	1,955 25
Kennebec	345 00	90 00	435 00
Androscoggin	248 75	297 50	546 25
Union, Machias, Nar-			
raguagus and St.			
Croix	437 50	22 50	460 00
			<hr/>
			\$5,092 08

A new form of contract will be made for 1916 and I expect that in 1916 we shall also benefit by cooperation along other lines not heretofore attempted.

SLASH LAW.

The Legislature after enacting this very important piece of legislation failed to pass any appropriation to carry out the provisions of same.

As a result, I was very much handicapped in getting the desired results. Also as the law did not become effective until July 3, I could not compel the owners and operators on lands where slash existed from the previous winter's cutting to clean up the same.

In the Maine Forestry District, the chief wardens were charged with the enforcement of the law wherever possible. In the remainder of the State, I secured the cooperation of the Selectmen and as a result much was accomplished. Everybody with whom I came in contact in this matter showed an earnest disposition to do their part and it was very gratifying to the Department to find that the spirit existed in connection with this law.

Dangerous slash conditions came to my attention from the following towns: Bowdoin, Detroit, Fayette, Garland, Howland, Hudson, Lebanon, Lang Plantation, Macwahoc Plantation, Marion, Meddybemps, New Gloucester, Old Orchard, Orient, Prentiss, Rangeley Plantation, Sebago, Silver Ridge Plantation, Sandy River Plantation, Verona and Wellington. In practically every case mentioned I secured the help of the party responsible and the conditions were remedied.

1915 IMPROVEMENTS.

AS REPORTED BY CHIEF WARDENS, AND RECOMMENDATIONS FOR 1916.

Louis Oakes, Greenville Junction—The lookoutmen made much needed improvements on their trails, telephones and camps during the rainy weather while they were on duty. The telephone lines connecting the lookout stations with the Central were kept in a very efficient manner which made it possible to discontinue any extended service by the commissioned patrol, thus saving a considerable sum of money which otherwise would have been spent in the maintenance of more patrolmen.

J. E. Junkins, Ashland—Telephone line from the Oxbow to Norway mountain repaired, about thirty-five miles, also a line run from the tower to the camp on this mountain. Trail cut out to Seboeis Lake. New lookout station built on Round Mountain, top of mountain cleared of trees and telephone line and trail put in first class condition. New camp built for the lookout man on Haystack mountain. On No. 9 or Bald Mountain new wooden lookout erected and new camp built also trees cleared from summit.

W. H. Hinckley, St. Camille, P. Q.—In this section the past season was very dry, in fact, more so than in any year I have seen in this territory. We are having cooperation of the Canadian fire rangers and are working together as much as possible. The greatest danger from fires here is on the Border and from fishermen from the small towns. We had no fires on the American side this year. Would advise starting on the new lookout station on Hardwood Mountain early in 1916.

Leon C. Irish, Haynesville—There should be a telephone line built from Glenwood Corner to Wytopitlock Lake, one and a half miles, also a tower on Beech Ridge Hill on the North Yarmouth Academy Grant. There should be a tower built on one of the Oakfield Range of hills which would do away with four patrolmen. A telephone line should be built from Hammond Plantation in to 3, Range 7.

C. H. Buswell, Milo—Two miles of new wire installed at the Boarstone mountain station also a new telephone instrument and a camp for the watchmen. We have had a very favorable summer in this territory.

George G. Nichols, Jackman—The telephone line from tower on Sally Mountain, which formerly ran on a trail different than that used by the watchmen, to the main line on C. P. R. poles was changed by watchmen during the wet weather to cedar poles set on main trail from camp to main line. Insulated line run from tower to camp. New telephone box installed in tower on Boundary Bald Mountain, camp covered with three-ply roofing and general improvements in the trail.

S. S. Lockyer, Berlin, N. H.—The Berlin Mills Company kept permanent patrolmen in the most dangerous localities on the Upper Magalloway and Swift River region in conjunction with the State Department. There is a considerable amount of operating this season adjoining the State line on the New Hampshire side, extending from the northeast corner of the Gilmanton and Atkinson Academy Grant northward to the Canadian Boundary. This region is to be cut heavily, is frequented by camping parties and as it is very inaccessible in case of fire seems to call for careful protective measures. A lookout station on Rump Mountain maintained by both Maine and New Hampshire would be of mutual benefit.

A. B. Haynes, Norcross—All telephone lines were put in good order the first of the season and every rainy day lines were gone over to cut out old trees and get the trails in better condition. A cabin for the watchman was built on Jo Mary Mountain. Three miles of new wire was put in in repairing the telephone line. Five miles of wire with insulators, iron rods for uprights, hammers and drills have been bought for the construction of the telephone line to the top of Katahdin, and there are two steel towers which should be placed where the stations now used do not cover. There is a camping outfit in this territory which is a great saving and convenience for a crew on a fire. A few new telephone instruments are needed but have a good supply of tools.

C. C. Murphy, Rangeley—All lookout stations, telephone lines and trails put in good condition. There have been no bad fires in the Forestry District due to the railroads, this season, as

all fires have been found by the section men and patrolmen in time to prevent spreading.

Claude L. Sawyer, Guerette—Fire notices were put up in different places along the various beats and all campers warned to be sure and extinguish their camp fires. All telephone lines were improved and put in the best of condition also the trails. There are tools enough here for another season at the different stations.

William E. Brown, Plaisted—New tools bought and properly housed. We have cleared telephone lines and connected same at my home, also cleared trail from camp to lookout station on Mt. Hedgehog. A trail cut from Rocky Brook to South Branch Birch River, also from Wallagrass Lakes to North Branch Birch River on to Nigger Brook lake, 15, R. 9. In wet weather rocks were taken out of the channel of Red River to make the same passable with a canoe up to the Falls. The west half of 15 R. 7 and the east half of 15, R. 8, has been cut hard for pulp leaving the forest there a regular brush pile. Lookout station and camp on Mt. Hedghog in good condition.

Silas F. Peaslee, Upton—General improvements to stations, trails, camps, etc. In certain places where there is much liability of bad fires, patrolmen should be kept on during the season.

L. P. Barney, Tarratine—Telephone lines repaired to Kibbie and Williams Mts. A new camp will have to be built on Kibbie Mt. in 1916. The towers should be painted another spring. The fire line into Jackman should be changed as it is too heavily loaded at the present time.

Leroy Brown, Lee—I would approve all lookout stations instead of patrols. Think stream patrol during certain fishing seasons would be well.

Fred Houghton, Topsfield—Territory posted with fire notices. All lookout men well supplied with equipment and lines put in good condition.

D. H. Lambert, Seboomook—Lookout stations should be repaired next spring and one of them raised about ten feet. I would also suggest that better and stronger glasses be used as the ones now in use are not to my mind, what is needed. A good spy glass would be better. A few more tool boxes should be made and placed in different parts of this territory. There has not been a fire in my territory this summer that has cost anything extra or done any damage.

E. H. Decker, Chesuncook—We repaired all telephone wires and built a new lookout station on Soper Mt. Bushed a trail from Chamberlain Lake to Allagash Lake, a distance of eight miles, in order to get supplies and men to Allagash Lake territory, in case of fire, this being made necessary by the rotting away of the old dam on Allagash Lake. Also made a trail from Woodman Brook to Smith Brook, four miles. The State should have a station on Allagash Mt. in 8, R. 14, and a motor boat on Chamberlain Lake. Equipment in good condition excepting dishes and bedding on Soper Mt.

John E. Mitchell, Patten—Telephone lines repaired, new batteries installed. During wet weather built lookout and camp on Mattagamon Mt., locating the same on the highest peak. The old station was not on the highest point. This was accomplished without any extra expense to the State. New cabin about a quarter mile from the tower, located near good spring water and wagon road. The old cabin is now used to store tools, etc. The new Matagamon station overlooked the territory of the Black Brook station which had been burned. Therefore erected a station on Pogey Mt. on T. 4, R. 9, which overlooks more territory and is more satisfactory. Took the tower house at Matagamon P. O. and placed it at the head of Second Lake to be used as a house for patrolmen at a total cost of three dollars. Erected the new station on Beetle Mt. with three foot peeled spruce underpinning and wired down the same. Installed stoves at Beetle and Pogey Mts.

Chas. J. Thibodeau, St. Francis—Camp built on the St. Francis River in T. 20, R. 11 and 12, opposite Blue River Village, P. Q., in which we have stored all fire tools used in that section. We put up twenty-two miles of wire from English Lake, shifted two miles of it from the woods to the Boundary Line where it would be much easier to keep in good repair. Cleared out all trails along the Boundary line from St. Pamphile to English Lake.

It would be advisable to build two camps on the Allagash River for the purpose of storing our fire tools one at the Michaud farm and one at Long Lake. I would also suggest that an independent wire be run from Round Pond on the Allagash River to Long Lake, a distance of about eight miles. A new lookout station should be built at Rocky Mountain; the

one built in 1907 from logs was not high enough for the territory surrounding and a forty foot tower is needed.

H. B. Stimson, Houlton, (Chief Warden, B. & A. R. R.)—Had a patrolman on about each ten miles of road which is about right under ordinary conditions. Sometimes in very dry periods the section crews patrol a part of track if the regular patrolman is a little late getting around.

Chas. Powers, Brownville, (Chief Warden, C. P. R. R.)—This Company provided and maintained during the fire season of 1915 a chief warden and four first class patrolmen, equipped with gasolene cars who not only kept track of the fires on the right of way but reported all fires within two miles of the line. There was supplied for emergency fire uses two tank cars each with 10,000 gallon capacity. These cars were equipped with a 10' x 7' x 10" Duplex Worthington Pump, two 4,300 ft. lines of 2 1-2 inch hose were kept on the cars. All track and operating men are educated to watch for and handle any fires which may come within their territory. It is a well known fact that careless pedestrians who are constantly trespassing on the right of way are to a great extent responsible for many fires.

W. H. Sylvester, Eustis—New trails cut out and old trail widened to stations on Tumbledown, Snow and Bigelow Mountains. Towers painted on Tumbledown and Snow Mountains. New telephone line constructed from Tumbledown Mt. to the Kibbie Stream and camp that opens up a lot of country that was not reached before. The new telephone line to Big Island last summer was a great improvement over the old line. Built about one mile of new telephone line on Bigelow Mt.

J. B. Rosignol, Grindstone—A ten mile road cut from Soldier Pond to Katahdin Lake and built a camp between these two points.

Albert F. Webster, Bingham—Considerable work done on telephone lines to lookout. Trails and roads kept in good condition.

Edwin C. Mooers, Milo—Telephone lines greatly improved to Ragged and Mattamiscontis Mountain, a total of twenty-two miles. Extra telephone box stalled on Ragged Mountain and the line running to the Jo Mary station was tapped and connected so that the watchman on this station was in touch with the chief warden at Norcross. One patrolman used and was also used

as a lineman taking care of all the telephone lines in this territory. I would recommend that a steel tower which is now stored at Mattamiscontis be erected.

Ezra N. Williams, Great Pond—A new telephone line constructed from Brandy Pond to Nicatous Club house on Township 40, a distance of eight and one-half miles.

Ralph L. Brick, Chesuncook—Two hundred and fifty dollars' worth of tools and equipment bought and stored in convenient places. Telephone lines and trails repaired and kept in good condition.

FOREST COMMISSIONER'S REPORT.

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FRANKLIN COUNTY

TOWNSHIP.	Date.	Acre.	Growth.	Cause.	Damage.	Cost to State of fighting same.
3 R 2 B, K, P, W, K, R, Jerusalem.	May 28.	12	White birch and Poplar.	Fishermen.	120 00	25 50
2 R 3 W, B, K, P, Langtown.	June 3.	20	Second.	Lumbermen.	200 00	179 75
3 R 3 W, B, K, P.	June 6.	200	Hard and soft wood.	Caretless smoker.	1000 00	1096 20
1 R 2 W, B, K, P, Redington Twp.	June 23.	3	Bushes.	Fishermen.	0	15 25
3 R 1 Rangeley Pl.	Sept. 7.	38sqrs	Misc. small growth.	Berry pickers.	1 00	14 25
Total		235				1,330 95

HANCOCK COUNTY

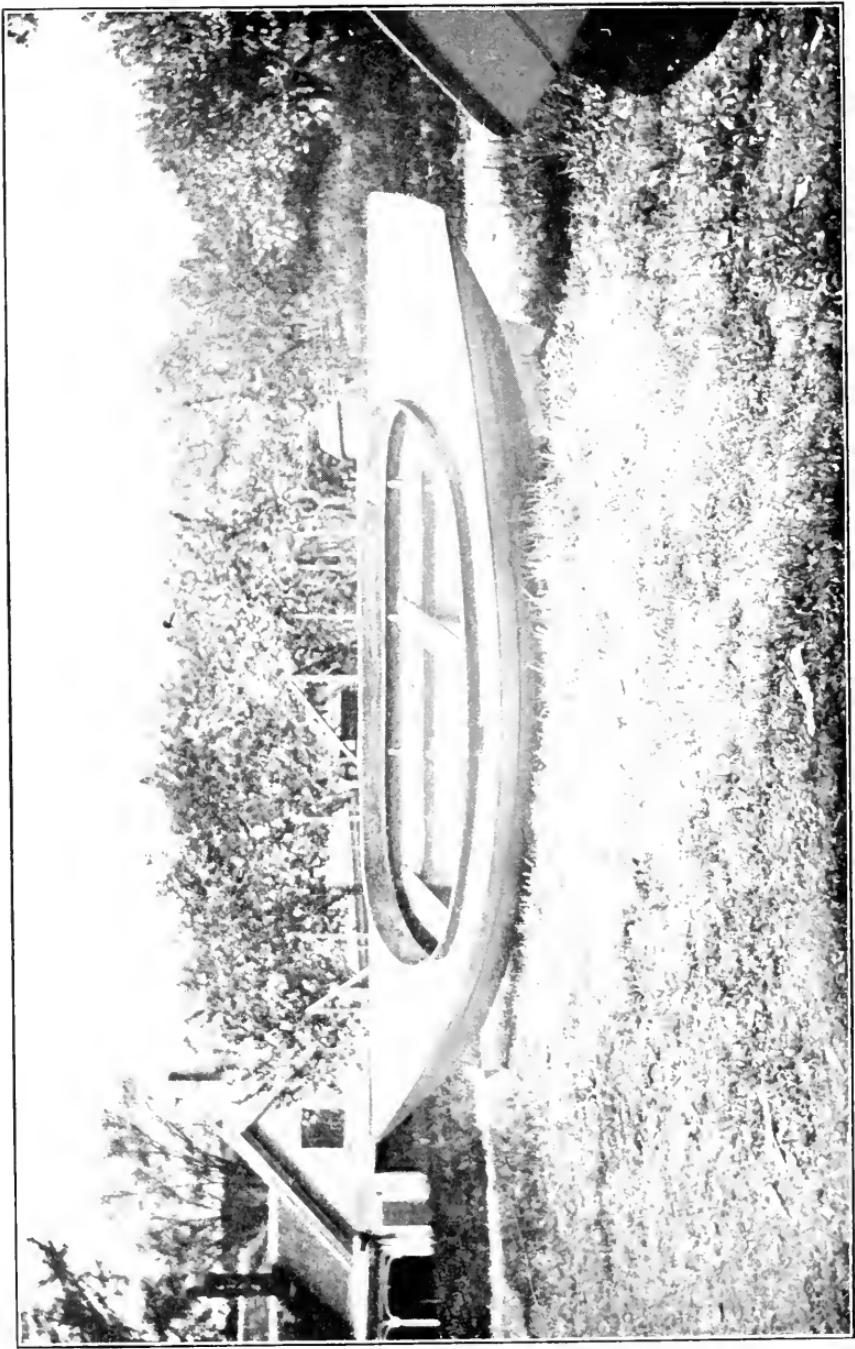
No. 28, M. D.	April 19	5	Bushes and hardwood.	Unknown.	200 00	115 30
No. 28, M. D.	April 21	500	Mixed.	Unknown.	1000 00	147 23
No. 22, M. D.	April 21	100	Burned land.	Blueberry fire.	150 00	12 20
No. 10, S. D.	April 22	100	Old burn.	Blueberry fire.	0	35 85
No. 33, M. D.	May 7.	10	White birch.	Unknown.	10 00	4 76
No. 33, M. D.	May 12.	300	Sm. white birch.	Unknown.	300 00	66 75
No. 16, M. D.	May 16	3	Burned land.	Unknown.	0	18 00
No. 9, S. D.	May 20	125	Old burn.	Fishermen.	0	16 00
No. 28, M. D.	May 30	10	Birch and burned land	Cigarette from auto.	15 00	19 84
No. 33, M. D.	May 31	300	Hardwood.	Not given.	400 00	39 15
No. 7, S. D.	June 3.	55	Mixed.	Train.	100 00	38 55
No. 21, M. D.	June 4.	100	Mixed.	Unknown.	400 00	125 50
No. 40, M. D.	June 5.	400	Small amt. pine and white birch, mostly old burn.	Unknown.	400 00	458 00
No. 3, N. D.	June 5.	800	Spruce, some hardwood.	Camp fire.	4000 00	402 03
No. 16, M. D.	June 6.	200	Barren.	Unknown.	0	155 01
No. 8, S. D.	June 28.	10	Small cutting.	Unknown.	50 00	28 00
No. 28, M. D.	Sept. 13.	4	Birch.	Auto party.	10 00	5 00
No. 32, M. D.	Oct. 16.	10	2d gro. pine, poplar.	Unknown.	50 00	7 75
Total		30281			87085 00	\$1694 92

PENOBSCOT COUNTY

TOWNSHIP.	Date.	Acres.	Growth.	Cause.	Damage.	Cost to State of fighting same.
Indian Purchase No. 3	April 20	2	Second growth.....	Unknown.....	0	15 50
6 R. 7 W. E. L. S.	June 9	4	Old works.....	Cigarette.....	20 00	13 60
Indian Purchase No. 3	Sept. 12	4	Spruce.....	Unknown.....	5 00	91 89
5 R. 7 W. E. L. S.	Sept. 19	4	Cedar and spruce.	Unknown	5 00	10 75
Total		10 ¹ ₄			\$45 00	\$131 74

PISCATAQUIS COUNTY

Elliottville Pl.	April 20	300	Hardwood.....	Spark from C.P.R. engine	1,500 00	22 65
Elliottville Pl.	April 21	150	Hardwood sprout.....	Spark from C. P. R. engine	450 00	18 00
2 R. 6 E. K. R., Big Squaw Town	April 21	4	Small hardwood, spruce and fir	Spark from C. P. R. engine	60 00	29 30
Elliottville Pl.	April 22	150	Hard and soft wood.....	Spark from C. P. R. engine	600 00	40 50
1 R. 9 W. E. L. S.	June 1	100	Second pine and hardwood	Smoking.....	500 00	303 00
7 R. 11 W. E. L. S.	June 1	350	Hard and soft wood.....	Sportsmen.....	1,050 00	110 00
4 R. 10 W. E. L. S.	June 2	7000	Old burn, very little green	Undetermined, sled		
6 R. 9 W. E. L. S.	June 9	5	Old burn—dry-kye.....	Shoe or pipe		2,494 77
1 R. 9 W. E. L. S.	June 30	400	Spruce and pine.....	Fishermen or drivers		34 10
1 R. 10 W. E. L. S.	July 13	5	Spruce (cut hard).	Camp fire.....		
8 R. 13 W. E. L. S.	July 20	3	Small fir.....	Not given		621 07
8 R. 12 W. E. L. S.	Aug. 3	4	Alder, few white birch.....	Camp fire.....		3 50
1 R. 10 W. E. L. S.	Aug. 6	100	Spruce, lately cut.....	Sportsmen.....		29 00
4 R. 10 W. E. L. S.	Sept. 3	3	Bushes.....	Not given		166 56
1 R. 9 W. E. L. S.	Sept. 16	1	Small spruce.....	Camp fire.....		18 25
				Camp fire.....		12 00
						Total
						\$6,215 00
						\$4,012 40



Type of two power boats purchased in 1916 for the use of the Maine Forestry District on Chesuncook and Chamberlain Lakes.

FOREST COMMISSIONER'S REPORT.

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SOMERSET COUNTY

TOWNSHIP.		DATE.	ACRES.	GROWTH.	CAUSE.	DAMAGE.	Cost to State of fighting same.
Dennistown		April 19	5	Hardwood	Set by unknown parties	20 00	0
Moxic Gore		May 16	4	Hardwood	Unknown	0	52 65
Pleasant Ridge Pl.		May 20			Roundside fire	0	19 00
East Carry		May 31	10	Hardwood	Unknown	10 00	41 15
Mayfield Pl.		June 1	400	Mixed	M.C. R. R. locomotive	750 00	590 80
Attean, 5 R. 1, N. B. K. P.		June 6	5	Second growth, burnt land	Camp fire	0	(in part) 29 35
Jackman		July 3	2	Soft wood	Unknown	15 00	26 85
Dennistown Pl.		Aug. 7.	1	Spruce	Unknown	6 00	3 20
	Total		426 1				\$ 801 00
							\$ 763 00

WASHINGTON COUNTY

Cooper	May 4	10	Gray birch	Unknown	0	13 00
Lambert Lake, 1 R. 3, T. S.	May 10	10	Hardwood and burnt land	Smoker	50 00	20 00
Township 26, E. D.	May 16	20	Burnt land	Unknown	0	12 50
Cooper	May 23	3	Small gray birch	Unknown	20 00	10 00
Codyville Pl.	June 1	30	Mixed	Fishermen	120 00	45 00
Wesley	June 2	10	Gray birch and scattering pine	Log drivers	25 00	13 75
Hinckley, 3 R. 1, T. S.	June 24					
8 R. 4, N. B. P. P.	Sept. 12	4	Spruce and beech	Cigarette	14 00	6 00
No. 6, N. D.	Sept. 12	5	Spruce and hardwood	Hunters	150 00	29 25
No. 27, E. D.	Oct. 10	125	Second growth, hardwood	Hunters	66 70	66 70
Hinckley Township, 3 R. 1, T. S.	Oct. 19	1	and some spruce land	Hunters, camp fire	250 00	138 70
Township No. 18, M. D.	Oct. 24	1	Hardwood	Hunters	10 00	10 00
			Spruce and pine	Camp fire	100 00	27 50
	Total	219				
						\$ 739 00
						\$ 392 40

UNINCORPORATED TOWNSHIPS

Summary of 1915 Fires

County	Acreage	Damage
Aroostook.....	1985 $\frac{1}{2}$	\$6,570
Franklin.....	235+.....	1,321
Hancock.....	3,028 $\frac{1}{2}$	7,085
Penobscot.....	10 $\frac{1}{2}$	45
Piscataquis.....	8,569 $\frac{1}{2}$	6,215
Somerset.....	426 $\frac{1}{2}$	801
Washington.....	219.....	739
Total.....	14,474 +	\$22,776

Forest Fires 1915 on Incorporated Towns.

ANDROSCOGGIN COUNTY

Township	Date	Acres	Cause	Damage
Mechanic Falls.....	May 25.....	50	Locomotive.....	\$ 500
Greene.....	May 31.....	100	Burning Brush.....	400
		150		900

AROOSTOOK COUNTY

Monticello.....	June 1.....	20	Clearing land.....	50
Ashland.....	June 2.....	100	Burning choppings.....	500
Bancroft.....	June 3.....	40	Burning choppings.....	600
Smyrna.....	June 6.....	4	Fishermen.....	
Ludlow.....	Aug. 7.....	1	Unknown.....	
		165		1,150

CUMBERLAND COUNTY

Freeport.....	March 15.....	40	Sparks from engine.....	2,000
Freeport.....	March 15.....	1	Sparks from steam rollers.....	
East Baldwin.....	April 20.....	200	Unknown.....	
Otisfield.....	April 20.....	100	Brush fire.....	2,500
Cape Elizabeth.....	April 20.....	20	Unknown.....	300
Cape Elizabeth.....	May 13.....	100	Burning Brush.....	200
		461		5,000

FRANKLIN COUNTY

Weld.....	April 21.....	100	Sparks from mill.....	250
Madrid.....	June 1.....	4	Sparks from engine.....	150
Madrid.....	June 5.....	2	Sparks from engine.....	50
		106		450

HANCOCK COUNTY

Brooksville.....	March 19.....	40	Unknown.....	75
Eden.....	March 20.....	20	Burning brush.....	15
Dedham.....	April 20.....	150	Burning brush.....	150
Brooksville.....	April 21.....	10	Burning underbrush.....	
Hancock.....	May 16.....	200	Cigarettes.....	1,000
Orland.....	June 2.....	50	Unknown.....	100
Orland.....	June 2.....	40	Burning brush.....	100
Sullivan.....		25	Burning brush.....	100
		535		1,540

KENNEBEC COUNTY

Wayne.....	April 15.....	30	Unknown.....	
Manchester.....	April 21.....	5	Burning brush.....	
Monmouth.....	April 23.....	10	Smoker.....	300
Readfield.....	April 23.....	200	Burning brush.....	1,000
Manchester.....	May 7.....	3	Clearing brush.....	
West Gardiner.....	May 12.....	50	Burning brush.....	700
Monmouth.....	June 2.....	35	Unknown.....	
Hallowell.....	Oct. 1.....	10	".....	500
		343		2,500

KNOX COUNTY

Township	Date	Acres	Cause	Damage
Vinalhaven.....	April 20.....	100	Sparks from wagon tire.....	100
Friendship.....	April 22.....	4	Burning rubbish pile.....	10
Friendship.....	June 6.....	20	Sparks from chimney.....	2,000
		124		2,110

LINCOLN COUNTY

Boothbay.....	March 4.....	2	Burning brush.....	
Boothbay.....	March 9.....	2	Grass fire.....	
Damariscotta.....	March 25.....	300	Bonfire.....	1,500
Newcastle.....	March 31.....	1	Unknown.....	15
Boothbay.....	April 3.....	4	Burning brush.....	
Boothbay Harbor.....	April 19.....	4	Burning rubbish.....	50
Bristol.....	April 22.....	50		300
Bristol.....	May 10.....	4	From blacksmith shop.....	150
Waldoborough.....	May 12.....	250	Unknown.....	1,500
Westport.....	May.....	700	Unknown.....	
		1,317		3,515

OXFORD COUNTY

Hiram.....	March 25.....	3	Burning rubbish.....	5
Hiram.....	April 15.....	4	Locomotive.....	20
Lovell.....	May 12.....	4	River drivers.....	
Byron.....	May 20.....	3	Choppers.....	
Milton Pl.....	Oct. 20.....	40	Brush fire.....	
		54		25

PENOBSKOT COUNTY

Garland.....	April 22.....	40	Burning pasture.....	
Greenbush.....	April 23.....	400	Unknown.....	
Hermon.....	June 6.....	20	Hunters (?).....	
		460		1,800

PISCATAQUIS COUNTY

Sebec.....	May 17.....	4	Brush pile.....	20
Sebec.....	June 1.....	25	Unknown.....	
		29		20

SOMERSET COUNTY

Bingham.....	April 20.....	30	Matches.....	50
Moscow.....	May 24.....	5	Unknown.....	40
Moscow.....	May 27.....	50	Locomotive.....	250
Moscow.....	June 1.....	850	Unknown.....	4,250
		935		4,590

WALDO COUNTY

Township	Date	Acres	Cause	Damage
Swanville.....	April 20.....	40	Burning weeds.....	250
Unity.....	June 5.....	100	Incendiary.....	300
Burnham.....	August.....	1	Steam engine.....	10
		141		560

WASHINGTON COUNTY

Topsfield.....	May 12.....	30	Smokers.....	30
Charlotte.....	June 2.....	150	Burning brush.....	150
Charlotte.....	June 6.....	20	Unknown.....	
		200		180

YORK COUNTY

North Berwick.....	March 31.....	25	Rubbish fire.....	300
Kittery.....	March 31.....	20	Gunners.....	600
Buxton.....	April 18.....	75	Grass fire.....	
Buxton.....	April 18.....	200	House burning.....	100
Waterboro.....	April 22.....	50	Unknown.....	1,000
North Berwick.....	April 23.....	25	Unknown.....	300
Limerick.....	May 19.....	200	Unknown.....	3,000
Kennebunk.....	May 28.....	5,000	Unknown.....	25,000
Shapleigh.....	May 28.....	20	Unknown.....	200
Shapleigh.....	May 28.....	500	Unknown.....	200
North Berwick.....	June 6.....	50	Tramp.....	300
		6,165		31,000

Incorporated Towns.

SUMMARY OF FOREST FIRES, 1915.

County.	Acreage.	Damage.
Androscoggin.....	150.....	900
Aroostook.....	165.....	1,150
Cumberland.....	461.....	5,000
Franklin.....	106.....	450
Hancock.....	535.....	1,540
Kennebec.....	343.....	2,500
Knox.....	124.....	2,110
Lincoln.....	1,317.....	3,515
Oxford.....	54.....	25
Penobscot.....	460.....	1,800
Piscataquis.....	29.....	20
Somerset.....	935.....	4,590
Waldo.....	141.....	560
Washington.....	200.....	180
York.....	6,165.....	31,000
Totals	11,185	\$55,340

1916

PUBLIC LANDS-1916.
to Nov. 15, 1916.

STUMPPAGE PERMITS, RENTALS, ETC., FROM PUBLIC LOTS.

For the year 1916, I have collected and turned over to the State Treasurer the following amounts: This income has accrued from stumppage permits let for the winter of 1915-16, for camp-site rentals for the year 1916 and for all trespasses committed in 1916. I am also pleased to report that all stumppage matters that have transpired during the years 1915-1916 have been settled in full.

Twp. 16, R. 10, W. E. L. S., Aroostook County	\$120 53
Twp. 13, R. 11, W. E. L. S., Aroostook County	22 04
Twp. 16, R. 11, W. E. L. S., Aroostook County	79 58
Twp. 17, R. 10, W. E. L. S., Aroostook County	132 09
Glenwood Plantation, Aroostook County	59 85
Nashville Plantation, Aroostook County	2,776 31
Reed Plantation, Aroostook County	123 55
Silver Ridge Plantation, Aroostook County	25 63
St. John Plantation, Aroostook County	1,300 26
Winterville Plantation, Aroostook County	390 00
Twp. 3, R. 3, W. B. K. P., Franklin County	100 00
Twp. 3, R. 4, W. B. K. P., Franklin County	90 00
Letter E, Franklin County	50 00
Twp. 4, R. 2, W. B. K. P., Oxford County	40 00

Twp. 4, R. 3, W. B. K. P., Oxford County	25 00
Twp. 5, R. 3, W. B. K. P., Oxford County	50 00
Twp. 5, R. 4, W. B. K. P., Oxford County	125 00
Twp. 5, R. 5, W. B. K. P., Oxford County	50 00
Magalloway Plantation, Oxford County	176 19
Twp. 5, R. 8, W. E. L. S., Penobscot County	10 00
Stacyville Plantation, Penobscot County	817 83
Elliottsville Plantation, Piscataquis County	1,196 55
Dead River Plantation, Somerset County	5 00
Flagstaff Plantation, Somerset County	910 92
Highland Plantation, Somerset County	97 47
Long Pond Plantation, Somerset County	1 00
West Forks Plantation, Somerset County	279 63
Codyville Plantation, Washington County	327 40
No. 21 Plantation, Washington County	1,616 61

	\$10,098 44

TRESPASS ON PUBLIC LOTS.

In 1916, trespasses occurred on the Public Lots of the following townships: No. 21 Pl., Wash. Co.; Glenwood Pl., Reed Pl., Stacyville Pl., all of which have been settled on terms satisfactory to the State.

The cause of trespass may be classified as follows: (1) The lines around the school land may have become obliterated or indistinct and the operator who is cutting on adjacent land

may unknowingly trespass. With the annual appropriation for retracting and defining lines around the Public Lots, trespasses from this cause are becoming fewer each year. (2) In some cases, there is evidence that the local Assessors have given the operator to believe that the authority to sell stumpage from Public Lots was vested in them. Sec. 18 of Chap. 8 of the Revised Statutes plainly confers the duties of the selling agent to the Land Agent although in all cases, the local Assessors are consulted as to the advisability of permitting stumpage. (3) Willful trespasses,—Further comment on this latter classification seems superfluous. I believe that severe measures should be taken that a repetition might be avoided.

INDIAN TOWNSHIP.

From the permits let for the winter of 1915-16, there has been collected this year the sum of \$18,990.62 which is passed to the credit of the Passamaquoddy Indian Fund. In the permits that have been let on this Township, pure stands of pine and spruce, in which there is no fir, have been reserved and left intact.

A permit has been granted this year by which the tops from the 1915-16 winter's cutting have been taken for lath-wood, thus reducing the fire risk on the township. A nominal rate of stumpage per cord was charged principally to pay inspection charges that no green timber should be taken.

Numerous applications have been received for white birch stumpage but up to the present time, it has not been deemed advisable to permit for birch alone by reason of waste to other lumber.

During the year 1916, I have made three trips to this township and for the winter of 1916-17 have granted two permits, similar to those granted in the past, at a satisfactory price and have appointed J. S. Farrar of Princeton, a competent scaler, to oversee the cutting.

ISLANDS.

Chapter 132 of the Public Laws of 1913 prohibits the sale of any island now owned by the State either on the coast or in the inland great ponds and lakes.

In 1916, under the direction of the Governor and Council, Hen Island, near Swan's Island was leased for a term of three

years at an annual rental of \$10.00 also Long Ledge and an unnamed ledge in Blue Hill Bay were leased for a term of five years at \$10.00 per year.

RETRACING AND DEFINING LINES AROUND PUBLIC LOTS.

In June of this year, the need of a resurvey of the south and west lines of the Public Lot in Twp. 15, R. 7, Winterville Pl., Aroostook county became apparent. In conjunction with the owners, Messrs. Powers and Lambert, this retracing was made by J. M. Brown of Eagle Lake. In this matter, the expense was divided equally between the above owners and the State.

With the granting of a permit to cut stumps from the Public Lots of Dead River Plantation this fall, it was necessary to re-run the lines around the school land. I have secured the services of Hon. Forrest H. Colby of Bingham in this survey.

I have also made arrangements to run the lines around the school lands of No. 33 Pl., Hancock county before the end of the present year and shall sell a portion thereof in compliance with Chap. 139 of the Resolves of 1915.

CAMP SITES ON PUBLIC LOTS.

The following leases have been granted during 1916:

TOWNSHIP.	Portion of Public Lot	Purpose	Lessee	Term.
Dead River Pl.	All of N. E. lot.....	Crops....	R. V. Safford, Dead River.....	1 year
Letter E., Franklin Co.	All.....	Camp Site	Jeff D. Thomas, Rumford.....	5 "
T. 4 R. 3, W. B. K. P. Oxford Co.	1 acre.....	"	Geo. W. Fanjoy, Cupsuptic.....	5 "
T. 4 R. 2, W. B. K. P. Oxford Co.	1 acre.....	"	Chester H. Sweatt, Andover	5 "
T. 5 R. 3, W. B. K. P. Oxford Co.	All N. E. and S. W. lots.....	"	Parmaehenee Club, New York City....	5 "
T. 5 R. 4, W. B. K. P. Oxford Co.	Remainder of all lots	"	Parmaehenee Club, New York City...	5 "
T. 5 R. 5, W. B. K. P. Oxford Co.	Southeast lot.....	"	Parmaehenee Club, New York City...	5 "
T. 5 R. 4, W. B. K. P. Oxford Co.	1 acre.....	"	E. S. Bennett, Wilsons Mills....	5 "
T. 5 R. 4, W. B. K. P. Oxford Co.	1 acre.....	"	J. W. Bueknam, Wilsons Mills....	5 "
T. 5 R. 4, W. B. K. P. Oxford Co.	1 acre.....	"	Roland H. Ripley, Wilsons Mills....	5 "

These leases were granted under the provisions of Chapter 306 of the Public Laws of 1915. A controversy at once arose as to whether or not this law was held to cover the Public Lots on which the timber and grass rights had been sold by the State. After due consideration and consultation with the Attorney General, I have concluded that while undoubtedly the Land Agent has the legal right to lease camp sites where the timber and grass rights have been sold yet the fair and equitable way for all parties concerned would be a joint lease by the stumpage owners and the State.

MISCELLANEOUS RECEIPTS.

For the year 1916, I have transmitted the following collections to the State Treasurer.

Interest on Deposits	\$17 54
Fees of Office	38 50

	\$56 04

BOOK OF PLANS FOR KNOX COUNTY.

In compliance with Chapter 8 of the Resolves of 1915, I have sent to the Register of Deeds at Rockland a duplicate book of plans as are on file in this office, including the plan of Isle au Haut and two others obtained from the Massachusetts Archives. The work of copying was done by Henry F. Hill, C. E., of Augusta and the completed book sent to Rockland June 23, 1916. The total expense of said book \$238.88.

STUMPPAGE PERMITS, WINTER OF 1916-17.

In addition to the two permits on Indian Township, I have granted fifteen permits to cut timber from the school lots of various Plantations in the State. Competent scalers have been appointed in every case and a satisfactory bond furnished by the grantees, who are in every case, responsible parties. A list of the Plantations on whose Public Lots, permits have been granted, follows: Caratunk Pl.; Caswell Pl.; Codyville P.; Coplin Pl.; Flagstaff Pl.; Dead River Pl.; Highland Pl.; Lakeview Pl.; Long Pond Pl.; Moose River Pl.; Moro Pl.; Nashville Pl., No. 14 Pl., Washington county; No. 21 Pl., Hancock county; Oxbow Pl.; Stacyville Pl., (2); St. John Pl.; West Forks Pl.; Winterville Pl.



Maine Forestry District Station, Kineo Mt.

FINANCIAL STATEMENT.

MAINE FORESTRY DISTRICT FROM JANUARY 1ST TO NOVEMBER 15TH, 1916.

Receipts.

Balance on hand, Jan. 1, 1916....	\$15,865 51
1916 Assessment	73,336 04
Interest on Deposits	31 04
From Federal Department as part payment on cooperative fire poster	100 00
Reimbursements from Railroads and miscellaneous income	495 89
 Total Receipts	 \$89,828 48

Expenditures.

Expense of fire protection during during season of 1916. (For de- tail see watershed expense)	\$51,356 77
Transfer to State Contingent Fund for amount appropriated in 1914 from general revenue to the Maine Forestry District, by Council order of September 30th, 1914 and ordered returned to the Treasury by Council Order dated March 28, 1916	10,000 00
	\$61,356 77
Balance November 15, 1916	 \$28,471 71

All proper bills that have been presented up to the date of this statement, have been paid in full and a careful estimate of the bills that will be received and paid to Dec. 31, 1916, does not exceed \$1,500.00.

1916 Watershed Expense to Nov. 15.

WATERSHED.	St. John River.	Penobscot River.	Kennebee River.	Andros-coggan River.	Narraguagus, Union, St. Croix, Machias.	Totals.
Chief Wardens	\$3,994 70	\$5,336 75	\$1,032 99	\$43 70	\$ 660 36	\$11,068 50
Deputy Wardens	128 42	152 10	261 43	5 00	189 05	736 00
Fire Expense	648 59	1,216 21	623 42	0	1,470 38	3,958 60
Lookout Expense	2,536 16	3,672 74	2,964 15	703 88	809 60	10,686 53
Patrol Expense	9,971 02	8,796 14	511 25	860 36	505 25	20,644 02
Tools and Supplies	288 56	395 09	190 57	27 70	723 03	1,624 95
Administration charges	755 93	610 71	349 60	119 13	206 91	2,042 28
Totals	\$18,323 38	\$20,179 74	\$5,933 41	\$1,759 77	\$4,564 58	\$50,760 88
<hr/>						
COST						
Fire fighting per aere . . . . .	.00019	.00044	.00039		.00158	
Protection per aere . . . . .	.00522	.00693	.00339	.00329	.00333	
Total per aere . . . . .	.00541	.00737	.00378	.00329	.00491	
<hr/>						
NOTE.—The amount of the watershed apportionment is the 1916 expense of fire protection as shown by the Financial Statement						\$51,356 77
Less credits from Federal Dept., Railroads and miscellaneous income						595 89
						\$50,760 88

LOOKOUT SERVICE—1916

With the heavy fall of snow late in the Spring and the already large amount of snow in the woods, the forests were safe from fire throughout the early part of the season. As a consequence, no lookouts were manned until after May 1st. During the month of May virtually the entire lookout force were put on with the exception of those of the Androscoggin watershed where the watchmen were not ordered on until after June 1st.

A few of the more unimportant stations were laid off during the rainy weather of the first few days in June. With this exception, the stations were run on full time during the summer up to September 20th when those of lesser importance were closed for the season. The most important stations were maintained up to the first week in October.

Taken as a whole, the season of 1916 was very favorable to green growth, while in certain territories, dry spells were in evidence, yet no protracted drought was suffered and the rainfall was fairly regular and general.

At the first of the season, all watchmen, excepting those in charge of the most remote and difficult stations were given the option of taking \$2.00 per day, straight time through the fire season or the regular \$2.50 per day and loose such time as became necessary on account of wet weather when their services were not needed. Many accepted the former schedule and as a result of this plan, I feel safe in saying that better results were obtained as this did away with any bad feeling caused by loss of time.

It was not deemed expedient to run the following stations: Pleasant Pond Mt., Double Top Mt., Lawler Hill, Sourdna-hunk Mt., Almanac Mt. Three new stations were located and run during the season: Pogey Mt., 4. R. 9, Piscataquis county, in place of the Trout Brook Mt., station that was burned in 1915, Allagash Mt., T. 7, R. 14, Piscataquis county; Picked Mt., Lang Town, Franklin county.

The stations marked with a star were those maintained at Federal expense during the season under the Weeks Law appropriation.

		Fires reported by same.
	Lookout Stations Operated.	
*No.	1. Lead Mt. Twp. 28, Hancock County	5
*No.	3. Attean Mt., Attean Twp., Somerset County	0
No.	4. Tumbledown Mt., Twp. 5, R. 6, W. K. R.....	0
*No.	5. Squaw Mt. Twp. 2, R. 6, B. W. P., Piscataquis County	7
No.	6. Snow Mt. Twp. 2, R. 5, Franklin County	2
*No.	7. Mt. Bigelow, Bigelow Twp., Somerset County	3
No.	8. White Cap Mt., 7, R. 10, N. W. P., East Bow- doin College Twp.....	8
No.	9. Spencer Mt. Middlesex Grant, Piscataquis County	10
*No.	10. Rocky Mt., So. part Twp. 18, R. 13, W. E. L. S.	2
No.	11. Pogey Mt., Twp. 4, R. 9., Piscataquis Co....	2
*No.	12. Otter Lake Mt., Twp. 3, R. 4, W. E. L. S....	7
*No.	13. Mt. Chase, Twp. 5, R. 6, W. E. L. S. (see note)	2
*No.	14. Ragged Mt., Twp. A, R. 9, W. E. L. S.....	1
*No.	15. Mt. Kineo, Moosehead Lake	6
No.	16. Mt. Coburn, Twp. 3, R. 6, B. K. P., W. K. R.	9
*No.	17. Wesley Mt., Wesley, Washington County ...	13
No.	18. Depot Mt., Twp. 14, R. 16, W. E. L. S.....	15
No.	19. Soper Mt., Twp. 8, R 2, W. E. L. S.....	2
No.	20. Round Mt. Twp. 11, R. 8, W. E. L. S.....	2
No.	21. Aziscoos Mt., Lincoln Pl., Oxford County	0
No.	22. Mt. Katahdin Twp. 3, R. 9, W. E. L. S.....	2
*No.	23. Bald Mt., Twp, 2, R. 3, E, K, R.....	1
No.	24. Kibbie Mt., Twp, 1, R, 6, W, B, K, P.....	2
No.	25. Priestly Mt., Twp. 10, R. 13, W. E. L. S.....	4
No.	26. Boundary Bald Mt., Twp. 4, R. 3, N. B. K. P.	2
*No.	27. Williams Mt., Twp. 2, R. 7, B. K. P., W. K. R.	2
*No.	28. West Kennebago Mt., Twp. 4, R. 4, W. B. K. P.	1
No.	29. Lily Bay Mt., A, R. 14, W. E. L. S., Piscata- quis County	0

*Maintained at Federal expense, 1916.

Lookout Stations Operated.	Fires reported by same.
No. 30. Cobb Mt., Lee, Penobscot County	0
No. 31. Taylor Hill, Princeton, Washington County..	2
*No. 32. Tug Mt., Twp. XXX, M. D.....	1
No. 33. Beetle Mt., Twp. 7, R. 10, W. E. L. S.....	2
No. 34. Mattagamon Mt., T. 6, R. 8, W. E. L. S.....	4
*No. 35. Boarstone Mt., Twp. 8, R. 9, N. W. P., Elliottsville	8
*No. 36. Joe Mary Mt., A. R. 10, W. E. L. S.....	5
*No. 37. Cooper Mt., Cooper, Washington County ..	11
*No. 38. Musquash Mt., Topsfield, Washington County	4
No. 39. Green Mt., Twp. 4, R. 18, W. E. L. S.....	0
No. 40. Mucelsea Mt., Twp. 5, R. 16, W. E. L. S....	4
No. 41. Saddleback Mt., Twp. 2, R. 1, Franklin County	5
No. 43. Nulhedus Mt., Twp. 5, R. 17, W. E. L. S....	0
No. 45. Norway Bluff, Twp. 9, R. 9, W. E. L. S.....	7
No. 46. No. 9 Mt., Twp. 9, R. 3, W. E. L. S.....	3
No. 47. Hedgehog Mt., Twp. 14, R. 6, W. E. L. S....	6
*No. 48. Three Brooks Mt., Twp. 15, R. 6, W. E. L. S.	7
No. 49. Speckle Mt., Grafton, Oxford County	0
*No. 51. Mattamiscontis Mt., Twp. 3, R. 9, N. W. P.	4
*No. 52. Haystack Mt., Twp. 11, R. 4, W. E. L. S....	5
*No. 53. Schoodic Mt., Twp. No. 9, Hancock County	0
No. 54. Hardwood Mt., Twp. 9, R. 18, Somerset County	0
†No. 56. Allagash Mt., T. 7, R. 14, Piscataquis County	4
†No. 57. Picked Mt., Lang Pl., Franklin County	0
 Total	 192

*Maintained at Federal expense, 1916.

†Station established, 1916.

NOTE: Mt. Chase reported 109 brush fires during season.

1916 PATROLS

During the fire season of 1916, there were one hundred and twenty patrolmen who worked either on part or full time. Included in this number are Deputy Wardens who only patrolled during emergency periods. This branch of the service was not called into action until after the first of June and was finally laid off for the season during the latter half of September.

The Chief Wardens were instructed to use patrolmen only at such times as conditions made it necessary. In the more remote territories, however, patrolmen were kept at work and during wet spells when their services were not needed on their routes, made many valuable improvements.

A new form of report was used this year with the result that a more systematic and intelligent record of their summer's work is on file in this office.

Herewith is submitted the record of the patrolmens' work during the summer with regard to discovery of fires. It is well to note in this connection that by a close inspection of the patrol and lookout reports of this season that, even with our present system of lookouts, fully 90 per cent of the fires reported as discovered by the patrolmen, have been previously picked up by the nearest watchman in his station.

In 1916, 36 per cent of the entire expenditure for fire protective purposes, including Federal aid, was for patrol work. Whether or not, the effectiveness of this branch of the work warrants such a large proportion of the fund is an open question and one that should be gone into carefully between the Forest Commissioner and the various timberland owners of the State.

By covering all traveled trails and tote-roads: by keeping an eye out for all fishing and camping parties in his territory: by warning all whom he meets in regard to fire danger and by oversight of brush fires and the like,—by all of the foregoing is realized the greatest benefit of the patrolmen. Each section has its own peculiarities and must be dealt with according to the best judgment of the Chief Warden and the Forest Commissioner.

Watershed.	Average number of Patrolmen, 1916.	Fires Discovered.	Average Fires Discovered Per Man.
St. John	52	45	.86
Penobscot	37	21	.56
Kennebec	8	0	0
Androscoggin	8	3	.37
Machias, Union, St. Croix, etc.....	15	3	.20
	—	—	
	120	72	

RAILROAD PATROLS—1916

MAINE CENTRAL RAILROAD.

At the first of the season, all stations of this Company were equipped with the "Help Wanted" notice. Chief wardens were appointed in the same manner as in 1915. The Company made a special effort during the season to see that slash lying adjacent to its right of way was cleared up. Twenty-six section foremen were commissioned as patrolmen.

BANGOR AND AROOSTOOK RAILROAD.

The stations of this Company were also supplied with the new notice. The Chief Wardens of 1915 were reappointed and on the resignation of H. B. Stimpson on May 6th, A. O. Holden of Oakfield was appointed to fill the vacancy. The right of way of this Company is largely through unbroken stretches of wooded country and very few fires were reported as started by the B. and A. locomotives which is a result of very efficient protection. Twenty-five patrolmen, equipped with velocipedes, covered the right of way through the fire season.

BOSTON AND MAINE RAILROAD.

Inasmuch as the right of way extends through the more settled part of the State, no patrolmen were commissioned by this Department but the Company maintained a patrol system, nevertheless. This Company is also fully alive to the benefits of the Slash Law in compelling property owners to clear slash lying adjacent to the Company's right of way.

CANADIAN PACIFIC RAILROAD.

Through the efforts of B. M. Winegar, Forest Inspector of this road and the chief warden Mr. Powers, there was instituted a very thorough and prompt system of reporting all fires, either incipient or otherwise, on or adjacent to their right of way. Through the cooperation of the Company and this Department, much slash adjacent to its right of way has been cleared up thus minimizing the danger spots. A new feature in railroad protection is found in the use of the tank cars (2) that have been added to the equipment of this Company. The photograph of this type of car which appears in this report clearly shows capacity, etc. Thirty-one patrolmen held commissions on C. P. R. R., right of way in Maine.

SANDY RIVER AND RANGELEY LAKES RAILROAD.

The situation along this road was handled in the same way as the Maine Central proper. Sixteen section foremen patrolled the right of way.

IN GENERAL.

The foremost problem of railroad protection today is not due to the danger from the right of way itself but from property, privately owned, adjacent to the Railroad Company's tracks where slash exists. For the greater part, the rights of way of the different roads in this State are in very satisfactory condition and only by a general educating and a strict enforcement of the Slash Law can we hope to improve the conditions mentioned.

In closing this subject I cannot but express my appreciation and thanks to the officials of the various railroads in the State for their efficient and prompt service during the season of 1916, that has brought results second to none in the history of the Department.

COOPERATIVE WORK WITH NEW HAMPSHIRE AND CANADA

NEW HAMPSHIRE.

Early in the season of 1916, a plan of cooperation was decided upon between E. C. Hirst, State Forester of New Hampshire and this Department.

There are three lookouts on the Androscoggin watershed that overlook New Hampshire, viz: Aziscoos, West Kennebago and Speckle Mts. Similarly on the New Hampshire side overlooking Maine Territory are Dew, Magalloway, Signal and Black Mt. stations.

The watchmen of both States were furnished with a list showing the watchmen and border wardens of the other State, their residence, telephone connection and other necessary information and instructed that in case of a discovery of fire over the border that the nearest warden should be notified immediately.

This plan served to bring closer relations between the field forces of the two States and excellent results were obtained.

In addition to this, two patrolmen were employed jointly by Maine and New Hampshire for patrol service in the valley of the Little Magalloway River and in the valley of Big, Meadow and Hammond Brooks, upper Oxford County, which territory includes lands on either side of the Maine-New Hampshire border.

CANADA.

At the beginning of each season, a very dangerous condition exists by reason of the clearing of lands by settlers on the border between Maine and Quebec.

In 1916, the Chief Warden on the Maine side had patrolmen on the ground early that no fires might get across the line. The Department of Lands and Forests of Quebec was approached with a plan of cooperation whereby the three lookout stations that overlook Canadian territory (Depot, Rocky and Hardwood Mts.) might be connected by telephone to reach

the Wardens of the Canadian Department and also that the Wardens on each side of the Border might work together on some definite plan of action in keeping tabs on such fires as were started.

The Canadian officials gave the plan its hearty approval and made an investigation of the situation. With conditions improving, no definite action resulted regarding the connection of the lookouts by telephone from the Canadian side but as this is a step in the right direction, I sincerely hope that this may be accomplished another season.

GENERAL SLASH WORK—1916

Hampered as I was by the non-appropriating of funds for this work, I followed up practically the same plan as already outlined in 1915.

On May 26, 1916, the following letter was sent to the Municipal officers of every city, town and plantation in the State.

To the Municipal Officers:

GENTLEMEN: I desire to again call your attention to the Slash Law, copy of which is enclosed.

If there are any places in your town where slash has been left within fifty feet of the right of way of any railroad or highway, will you kindly notify this Department at once, giving the location of same and the name and address of the responsible parties that I may take it up with them and endeavor to have them clean it up.

May I have your earnest cooperation in this matter as it is only with the aid of the town officials that this Department can learn of existing conditions in the various towns and an effort made to lessen the forest fire risk.

Kindly advise me at once.

Very truly yours,

FRANK E. MACE,

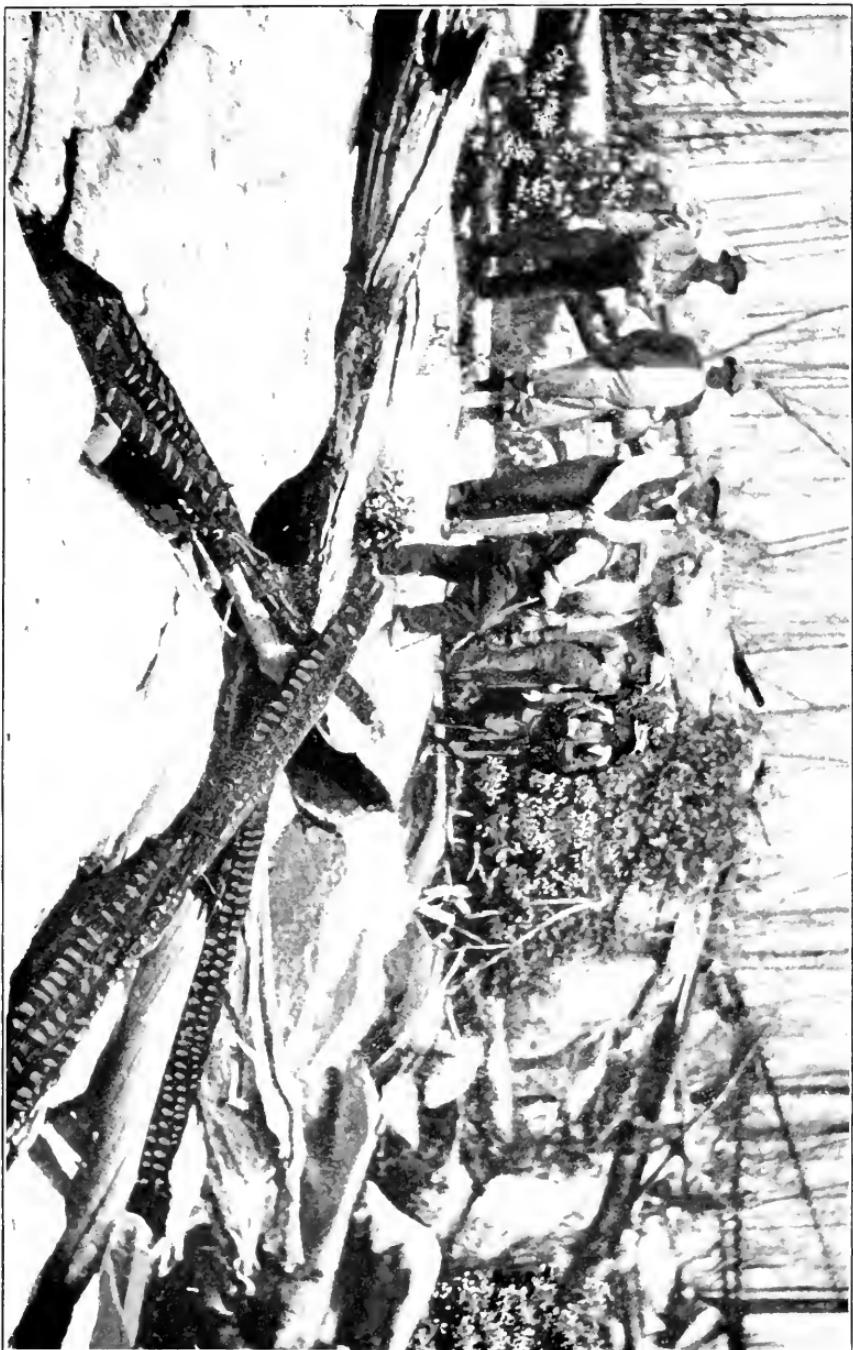
Forest Commissioner.



WHAT IS YOUR CHOICE? GREEN GROWTH—
View of Public Lot, Eustis, Maine.

— OR BURNED LAND?

View of burned land on trail from Cooper Pond to Leavitt Pond, Twp. A, R. II, W. E. L. S. Pisc. Co.



I am pleased to report that I find this law meets with the approval of a great majority of those who come in contact with it and the number of cases that were cleared up this year is indeed surprising.

Lack of space forbids a report in detail of the very many cases that came up during the year and the disposition of same.

Within the Maine Forestry District, the Chief Wardens were charged with the enforcement of the Slash Law. I quote from a special letter of instruction: "All Chief Wardens of the Maine Forestry District are hereby charged with the enforcement of the Slash law, copy of which is enclosed. You can attend to this matter in connection with your regular work and you will please notify me of all cases that you find and notify the responsible party to clear up the same. Burning is the best method as that does away with it for all time and the party burning should get the approval of yourself before attempting to dispose of it. You should allow them to burn only at such time as conditions will allow."

In the Chief Wardens' reports for the year, you will note that the disposal of slash was one of the important improvements made during the summer.

Federal Cooperation—1916

LOOKOUT SERVICE.

The preliminaries attendant upon the closing of my contract with the Forest Service of the U. S. Department of Agriculture for Federal cooperation during the season of 1916 were practically the same as in 1915.

I submit said contract in full as a part of this article that its terms may be fully understood by all who may take the pains to read it.

Under the terms of this contract, there was allotted from the Weeks Law appropriation the sum of \$8,000.00; \$6,500.00 of which was available for expenditure within the Maine Forestry District; \$1,500.00 for cooperation outside the District for fire prevention work subject to the approval of Federal authority.

I will first take up the result obtained from the allotment of \$6,500.00 within the Maine Forestry District. The Forest

Service selected a list of lookout stations that would be maintained at Federal expense, the total of which expenditure to be in proportion to the State expenditure as contemplated by the budget submitted. The Federal stations are designated by a star in "1916 Lookout Service."

Following is a statement showing the result of 1916 cooperation under the Weeks Law:

Total amount received from Federal

Government for lookout service \$5,926 00

Expended as follows:

FOR LOOKOUT WATCHMEN.

Watershed

St. John	\$781 00
Penobscot	1,830 25
Kennebec	1,586 25
Androscoggin	172 50
Machias, etc.....	1,556 00
Total	\$5,926 00

By the system of establishing certain lookouts as Federal stations, the merit system must prevail from year to year and a removal of a watchman from a Federal station, except for inefficiency or other sufficient cause, may result in the termination of the cooperation by the Federal Government.

COOPERATION OUTSIDE OF THE MAINE FORESTRY DISTRICT.

With \$1,500.00 available for work outside the Forestry District, it was the earnest desire on the part of the officials of the Forest Service and myself, to inaugurate a system of forest fire protection in a group of towns not included in the District —heretofore never attempted.

In the matter it was necessary that the towns should appropriate funds to share the cost of the Federal employees and the purpose was to create a permanent protective system rather than to remedy a purely local condition of short duration.

WATERBORO PROJECT.

From information based on the findings of this Department and also, through the efforts of Mr. Ivory H. Smith of Water-

boro, a very public spirited citizen, an attempt was made to establish a modern lookout station on Ossipee Hill in the town of Waterboro. I personally visited the site of the proposed tower and found it to be an excellent location overlooking a well timbered area including part of the towns of Alfred, Limerick, Shapleigh, Waterboro, Lyman, Hollis, Buxton and Newfield.

I estimated the cost of a proper lookout with necessary telephone connection at \$400.00 with a further necessary expenditure of \$200.00 for manning the station for a necessary length of time through the fire season.

The proposition was submitted to the towns named above in time for the annual March meeting. Alfred, Limerick, Shapleigh and Waterboro appropriated \$50.00 each for the purpose. With \$200 subscribed and the allotment of an equal amount from the Federal Department, everything was in readiness for the erection of the station, as I had received assurance that the funds for the manning of the station would be forthcoming either from supplementary appropriation by the town or public subscription.

It was doubly surprising that the whole plan should be blocked by a land owner, one who benefits most from forest protection, who owned the top of the hill where the lookout was to be placed. Such an exorbitant figure was placed on the value of this privilege that all proceedings were immediately stopped. Now that a start has been made in this direction, I am very anxious that the difficulty may be removed and a station erected.

PARSONSFIELD PROJECT.

The Sokokis Lumber Company of Kezar Falls were interested in the establishing of a patrol in the town of Parsonsfield and as evidence of their interest contributed the sum of \$100.00 to start the project.

As stated previously the Federal Department cannot legally offset private expenditure but any State expenditure for protective work outside of the Maine Forestry District was allowed to offset the Federal allotment in any outside cooperative project.

Accordingly, there was allotted by the Government the sum of \$100.00 making a joint sum of \$200.00 for the Parsonsfield pa-

trol system. Geo. F. Granville of Parsonsfield was commissioned as a patrolman and was instructed as to his duties.

With the conditions in this section as existed throughout the fire season, it was not deemed necessary to use the patrolman. I trust that this project may be accomplished another year providing the condition of the woods demands a patrolman's attention.

SLASH INSPECTION AND DISPOSAL.

With \$200.00 apportioned to the Waterboro Lookout and \$100.00 to the Parsonsfield Patrol system, the balance of the \$1,500 available from the Federal Government for outside co-operation or \$1,200 was allotted to an inspection of slash conditions and slash disposal work throughout the State outside the Forestry District.

The Slash Disposal Wardens appointed for this work received \$5.00 per day which covered all expenses including their own automobile as by this mode of travel, much country can be covered in comparatively short time.

I submit a list of the wardens appointed, their territory and the sum allowed for the work in each county.

Name and Address.	Territory Covered.	Amount Available.
A. C. Bowie, Auburn, R. F. D. No. 1	Androscoggin	\$ 75 00
Harry L. Malone, Haynesville	Aroostook	150 00
No appointment made	Cumberland	100 00
Charles W. Snell, Farmington	Franklin	75 00
A. Russell Mace, Aurora	Hancock	75 00
Inspection made by Department	Kennebec	
No appointment made	Knox	50 00
No inspection made	Lincoln	50 00
Harry King, Bethel	Oxford	75 00
Chas. A. Stevens, Orono	Penobscot	100 00
Irvin Wingate, Sebec Station	Piscataquis	75 00
James T. Temple, 33 Shephard St., Bath	Sagadahoc	50 00
F. C. Pooler, Palmyra	Somerset	75 00
Walter B. Twombly, Monroe	Waldo	75 00
Crawford M. Plummer, Harrington	Washington	75 00
Harold B. Emery, Limington	York	75 00
	Total	\$1,175 00

These wardens were charged with the direct enforcement of the Slash law and were empowered to compel the clearing up of all slash left within 50 feet of either side of the highway or railroad right of way.

Daily reports were provided, showing all necessary information and are on file in this office. By using their automobile, in the majority of cases, the Wardens covered their entire respective county. In this way, a thorough inspection was made in thirteen counties of the State and the results obtained fully warranted the expenditure.

As in the case of Federal lookout watchmen, the Wardens received their pay direct from the Federal Department and to date, the State has benefitted by \$750.00 paid to the wardens and on receipt of outstanding unpaid bills on this account will bring the total to \$975.00.

"HELP WANTED" NOTICE.

In addition to the \$8,000 allotment as explained the Weeks Law allowed for cooperation along publicity lines, with Federal approval, not exceeding \$100.00. Accordingly, with the approval of and in conjunction with the Forest Service, the Help Wanted notice was published and circulated. In this matter the State received the maximum amount as shown in the 1916 Financial Statement.

SUMMARY.

I have endeavored to outline in detail the transactions that have been attempted and accomplished by the Department in conjunction with the Federal Forest Service.

The receipts, directly and indirectly received from the Federal Treasury are as follows:

For "Help Wanted" cooperative poster	\$100 00
For Federal Watchmen	5.926 00
For Slash Disposal Wardens	975 00
Total	\$7,001 00

My dealings with the Federal Department have been very pleasant and I have always found the officials open to conviction on any plan of cooperation consistent with the Weeks Law.

UNITED STATES DEPARTMENT OF AGRICULTURE
AGREEMENT

FOR THE PROTECTION FROM FIRE OF THE FORESTED WATERSHEDS OF NAVIGABLE STREAMS

UNDER SECTION 2, ACT OF MARCH 1, 1911, (36 STAT., 691).

THIS AGREEMENT, made under authority of Section 2 of the Act of Congress, approved March 1, 1911, (36 Stat., 691) this first day of January, 1916, by and between the State of Maine, by and through the Forest Commissioner (hereinafter called the "Commissioner") of the first part, and the Secretary of Agriculture of the United States (hereinafter called the "Secretary") of the second part.

WITNESSETH:

WHEREAS the said State has requested the cooperation of the said Secretary in the protection from fire of the forested watersheds of navigable streams; and

WHEREAS the said State has provided by law for a system of forest-fire protection;

NOW, THEREFORE, the said parties do mutually promise and agree with each other to establish and maintain a cooperative fire protective system covering any or all private or State forest lands situated on the watersheds of navigable rivers within the State; and to furnish for this purpose lookout watchmen or patrolmen and take such other protective measures as may be deemed advisable, under the conditions hereinafter provided, to wit:

ARTICLE I. The Commissioner agrees:

1. To submit a budget to the Forester of the U. S. Department of Agriculture (hereinafter called the "Forester") as soon as practicable after January 1 of each year, said budget to

show for the cooperative area covered by this agreement and for the remainder of the State separately the total estimated expenditures of the State (excluding town and county funds) for all fire protection purposes throughout the current calendar year; said budget to be accompanied by a statement supplemented with maps, if necessary, showing approximately

(a) The watersheds of navigable rivers which are proposed to be protected under this agreement;

(b) The location and area of the forest lands on such watersheds which will be protected by the State, municipalities, or private owners; the number of lookout watchmen or patrolmen with their headquarters which will be employed by each of these three agencies; the character and extent of other protective measures which it is proposed to put into effect at their expense; and the total estimated expenditure under normal conditions by each of these three agencies;

(c) The location and area of the forest lands on such watersheds upon which Federal funds will be expended and the number of lookout watchmen or patrolmen with their headquarters which will be paid from such funds;

(d) The periods during which protection from forest fires is proposed under this agreement; and

(e) The State funds already appropriated or otherwise available for expenditure for fire protection purposes.

To inform the Forester from time to time subsequent to the submission of the budget of an additional appropriations or sums made available for fire protection during the remainder of the calendar year, or of any reductions in such sums, and of any revision of the budget thereby made necessary.

2. To secure for the Federal men employed under this agreement appointment as deputy State fire wardens or otherwise, without additional compensation, and such police powers for the prevention and control of forest fires as may be granted under the laws of the State of Maine;

To employ such men only in localities on the watersheds and areas approved under this agreement and within the season or seasons when normally there is a real fire danger;

To equip them with such fire-fighting tools or devices and authorize them to employ such assistance in fighting fires as State funds and the State fire laws and regulations will permit:

To instruct them *in writing* as to their duties and supervise their work;

To be responsible for seeing that during actual danger periods each Federal employee keeps a vigilant lookout for forest fires and makes every possible effort to have such fires extinguished whether they occur on lands belonging to the State, the Federal Government or a private owner and to see that during other times each such employee, if hired for continuous service, be kept engaged in other fire protection work upon the areas approved under this agreement; and

To make such inspection of the work done under this agreement as may be necessary to promote the effectiveness of said work.

3. To expend the Federal funds (allotted as hereinafter provided) exclusively for the hire of lookout watchmen or patrolmen unless otherwise specifically authorized in advance by the Forester;

To regulate such Federal expenditures so that during any Federal fiscal year they shall not exceed the amount appropriated and expended by the State during the same period for the purpose of protecting from fire forested watersheds of navigable streams in the United States;

To regulate the expenditure of Federal and State funds from month to month throughout the fire season as far as practicable in the proportion of the total Federal allotment to the total State budget for the cooperative area provided for herein, and in the event of the State expenditure throughout the current calendar year falling below the said total State budget, the proposed Federal expenditure will be decreased proportionately: *Provided* that, subject to agreement, not to exceed twenty (20) per cent of said budget may be set aside as a reserve and be exempt from the above conditions of expenditure;

To submit to the Forester on or before the fifteenth of each month a statement showing such expenditures from both Federal and State funds during the preceding calendar month; and

To certify by telegram or letter to the Forester in asking for an increase of allotment or waiver in the manner of expenditure above prescribed the facts establishing the existence of an extraordinary fire hazard and the need for such increase or waiver.

4. To use every proper means to bring about the active cooperation of the owner with respect to all private forest lands afforded protection against fire under this agreement, including aid from him in the hire of lookout watchmen, patrolmen or fire-fighters, construction of improvements, and the like.

ARTICLE II. The Secretary agrees:

1. To fix the sum to be allotted for expenditure by the Federal Government during any calendar year or during other periods as the occasion may require, including emergency allotments;

To approve the areas on which such sum or sums shall be expended; and

To stipulate in times of emergency any waiver in the manner of expenditure herein prescribed which he may deem best.

2. To appoint the Commissioner a Collaborator in the Forest Service of the U. S. Department of Agriculture at a Salary of One Dollar (\$1.00) a month;

To authorize him to select the Federal men employed under this agreement in accordance with a standard of qualifications to be prescribed by the Forester, which is made a part of this agreement and marked Exhibit "A;"

To authorize him to employ them, with the approval of the Secretary, at not to exceed Ninety Dollars (\$90.00) for a thirty-day month, or its equivalent of Three Dollars (\$3.00) per diem, and to certify such employment on properly executed vouchers to the Fiscal Agent, Forest Service, Washington, D. C., at the end of each calendar or fractional month;

To require him to hire at a *monthly* rate of pay men who are expected to perform continuous service in excess of 30 days;

(The men paid at a monthly rate will receive pay for Sundays and legal holidays* whether or not any service is actually performed on such days and for days when because of inclement weather no outdoor service can be performed. Men employed and paid by the month may be granted 1 1-4 days leave with pay, for each month of continuous service, beginning with the third month. When such men are absent from duty, except as noted above, such time must be deducted from their salary

*January 1, February 22, May 30, July 4, Labor Day, Thanksgiving Day, and December 25.

at the rate of 1-30 of their monthly salary for each day or fraction thereof of such absence from duty.)

To require him to hire at a daily rate of pay men who are expected to perform only intermittent service, such as on days of actual fire danger;

(Per diem men must perform service on each and every day for which they receive pay; that when paid for Sundays or legal holidays service must be necessary and actually performed to which the supervising officer (Collaborator) certifies on the payroll account.)

To give him direct charge of the force of Federal men employed under this agreement; and

To extend to him and the Federal men employed hereunder the use of the United States penalty frank in accordance with the accompanying regulations marked Exhibit "B" which are made a part of this agreement.

ARTICLE III. It is expressly understood and agreed between the parties hereto:

1. That the said Secretary or his authorized representative shall have full authority to inspect the protective areas and the forces therein authorized, and at his option, by giving the Commissioner written notice, to withdraw his approval of any such area or portion thereof, or terminate the employment of any Federal patrolmen, lookout watchmen or fire-fighters or of the Commissioner as Collaborator in the Forest Service.

2. That both the Commissioner and the Forest Service of the U. S. Department of Agriculture shall have equal right to publish the results of the cooperation under this agreement: *Provided*, That any results intended for publication, except press notices of momentary or local interest, be approved by the Commissioner and by the Secretary; and that in all such publications it shall be plainly stated that the results were secured through cooperation between the Commissioner and the Secretary.

3. That this agreement shall become effective as of the day and year first above written and continue in force thereafter, subject, nevertheless, to the availability of funds appropriated by Congress for carrying out the provisions of Section 2 of the Act of March 1, 1911, and to any amendments which may be made hereof by mutual agreement of the parties; and it is

expressly understood that this agreement or any modifications hereof may be terminated by either party upon thirty (30) days' written notice to the other.

IN WITNESS WHEREOF, the said Commissioner has hereunto affixed his name and seal on the Fifth day of April, 1916, and the said Secretary has hereunto set his hand and affixed his official seal on the date below written.

By FRANK E. MACE,
Forest Commissioner.

Signed and sealed by the Secretary of Agriculture this 14th day of April, 1916.

D. F. HOUSTON,
Secretary of Agriculture.

EXHIBIT "A"

BEING

QUALIFICATIONS FOR FEDERAL MEN EMPLOYED UNDER THE WEEKS LAW.

Candidates for appointment as temporary employees during the season of serious danger from fire must be able-bodied and capable of enduring hardships and of performing severe labor under trying conditions; must be able to build trails and cabins and to pack in provisions without assistance; must be thoroughly familiar with the region in which they seek employment (or in other similar regions) including its geography, its forests and industrial conditions.

Invalids and consumptives seeking light out-of-door employment are not qualified for the work and should not be employed.

Employing officers will require sobriety, industry, physical ability and effectiveness, will give preference to local residents of whose fitness he is fully satisfied, and will employ no person for personal or political considerations.

SC—Weeks Law Agreement, 1916. Maine.

AUGUSTA, August 7th, 1916.

The Honorable, The Secretary of Agriculture,

SIR: With reference to ARTICLE II, Section 2, paragraph 3, of the agreement dated April 14, 1916, between yourself and

the State of Maine for the protection from fire of the forested watersheds of navigable streams under Section 2, Act of March 1, 1911 (36 Stat., 691):

I very much desire to extend this protection outside of the Maine Forestry District, and in order to secure efficient employees to conduct the work which is contemplated in that territory, it will be necessary to offer them a per diem of \$5.00 which will cover salary and charges for subsistence and transportation, including the use or hire of an automobile. I therefore, respectfully request that said paragraph be amended by adding the following proviso:

Provided, however, that he may employ them outside of the Maine Forestry District, with the approval of the Secretary, at not to exceed One Hundred and Fifty Dollars (\$150.00) for a thirty-day month, or its equivalent of Five Dollars (\$5.00) per diem.

It is further requested that this proposed amendment become effective August 1, 1916.

Very truly yours,

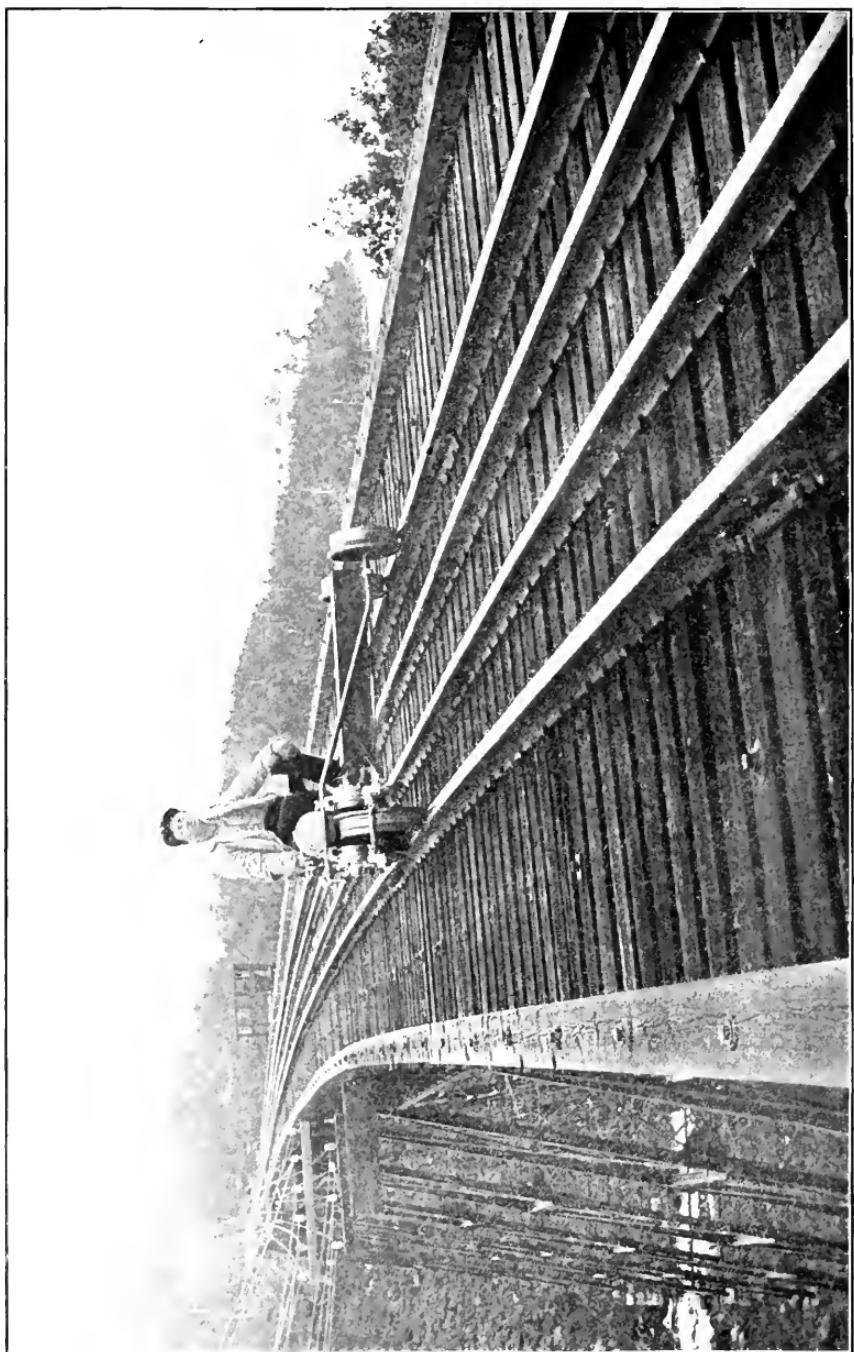
FRANK E. MACE,

Forest Commissioner.

Approved:

C. F. MARVIN,

Acting Secretary.



Canadian Pacific Railroad Patrolman, equipped with gasoline car, crossing trestle at Onawa, Maine. Boarstone Mt. in the background.

1916 IMPROVEMENTS AS REPORTED BY CHIEF WARDENS

E. H. Decker, Chamberlain and Eagle Lake Territory, Piscataquis County—I have built a lookout station on Allagash Mt. also a camp at the foot of the mountain for the watchman I have put up nine miles of telephone wire and took down four miles of old line to go from Indian Pond Brook to Chamberlain Farm. Made new trail across Twp. 9, R. 13, and 9, R. 14, and put three hundred porcelains on the old wire.

Claude L. Sawyer, Long, Second, Square and Cross Lake territory, Aroostook County—Repairs on lookout station, Twp. 15, R. 6. New trails cut to lookout. Fire notices posted on all brooks, lakes and Fort Kent-Caribou road, Twps. 16, R. 4, 17, R. 4 and 5. I think as a rule that the people in this section are a great deal more careful than they have been in years past in regard to fires.

William E. Brown, Fish River territory, Aroostook County—New trails have been cut and old ones cleared out. Fire notices have been posted on all lakes and streams also along tote roads and places of travel in the woods. The people in this section are more careful of fires.

J. E. Junkins, Aroostook and Big Machias Rivers, Aroostook County—at the Norway Bluff station, we cleared the trees from the top of the mountain that all surrounding country can be seen. At Monsungun Lake, we shifted the telephone wire from the lake shore to the tote road so that the line would not get into the water. At the mouth of Mooselook, we built a piece on the State Camp, 14 feet square. At Squa Pan Lake, we cut two trails, one from the foot of the lake to the north branch of Blackwater and one from the lake to the south branch of Blackwater. Repaired the station on Haystack Mt.

Chas. J. Thibodeau, Allagash, St. John river territory, Aroostook County—We built a camp 14 x 15 feet, close by a spring of good water on the west shore of Umsaskis Lake, about 40 rods north of the mouth of Priestly Brook in Twp. 11, R. 13. In this camp we have stored all fire tools used in that section.

This camp is on the main line to Priestly Mt. and by so doing have cut out the maintenance of three miles of unnecessary telephone line which was very difficult to maintain on account of having to cross the stream.

W. H. Hinckley, Head Waters of St. John River, Northern Somerset County—I have built a new lookout station on Hardwood Mt., Twp. 9, R. 18, which is a great help to the territory. All telephone lines have been repaired. We were fortunate in having no fires this season although it was quite dry at times.

Leon C. Irish, Southern Aroostook County—We have built a telephone line to Wytopitlock Lake a distance of about two miles which is of great importance in the work. Also repaired the telephone lines which runs to the fire camp on 3, R. 3, and is in fine condition now.

R. L. Brick, Chesuncook Lake territory—In the last two years we have placed \$350 worth of new tools, telephones, and equipment in Chesuncook section; have put glass in the lookout station and also painted the same. Have kept the trail in good condition and covered the watchman's camp this year.

We have reset all telephone poles and changed what wire would come in to the Ripogenus and Chesuncook flowage and the telephone service has been excellent this past season. All the section has been properly posted with fire notices.

There has been placed on Chesuncook Lake a 21 foot 5 horse power Page Motor Dory, which is a very sea-worthy boat, not expensive to run and capable of doing fine service.

There have been several new trails spotted and all old trails kept open.

The foremen of all lumber camps as well as the townsmen, guides, and sportsmen are cooperating with the Forest Fire District in this section. Special mention should be made of the Great Northern Paper Company who extend all available help of men, horses, equipment, supplies and motor vehicles in case of fire. They furnished this year a motor cycle with side car attached for your Chief Warden's use on the Ripogenus and Grant Farm road. They have also left telephones all through Pine Stream and Cuxabexis sections so that a patrolman is able to communicate with the Chief warden in a very short time. The Patrolmen have had the use of what vacant lumber camps there are in this section, also canoes, stoves, bedding, etc.

D. H. Lambert, Seboomook territory, West Branch of Penobscot—In the Spring I found that owing to lumbering operations the telephone line had been badly damaged and necessitated the building of a new one, one mile in length. I repaired the lookout stations and put new roofing on Green Mt. camp.

Thomas Griffin, Lower Lakes Territory, West Branch Waters—We built a camp on the summit of Jo Mary Mountain and put telephone in same. As the telephone line to this station did not work well on account of running close to another line from Norcross to Perkins Siding we set this back into the woods and have had a good working line since. All property of the State in this section in good shape.

C. H. Buswell, southern part of Forestry District in Piscataquis County—Five miles of new line was constructed from B Pond to Charles Berry's camps at Yoke Pond. A new cabin for the watchman was built at Boarstone Mt.

J. B. Rosignol, South end of East Branch of Penobscot—I have fixed the road so that I can drive within one-half mile of the lookout station used by the patrolmen. I have repaired an old lumbering telephone line from this lookout to Whetstone Falls on the East Branch.

John E. Mitchell, Upper East Branch Waters—I have built one and one-half miles of telephone line from the Lincoln Pulp Wood Company's line to lookout station on Pogey Mountain. I have also built four miles of line up Hay Brook to patrolman's camp.

Edwin C. Mooers, Mattamiscontis, Seboeis, and Schoodic Lake territory—At the first of the season we found the line running from Ingalls Siding to Mattamiscontis Mountain in very bad shape caused by lumbering operations of the winter before, and by this careless and needless work it cost the State as much to repair as it would a new line, however, this was repaired and good connection established. The cabin on Ragged Mountain was burned during the early spring, cause unknown, but presume it was fishermen or hunters, leaving a fire in the small stove. A new cabin, 12 x 14 was built. The telephone line to Ragged Mt. was also put in first class shape.

George G. Nichols, Somerset county west of Moosehead Lake—The Attean Mountain tower has been lined with matched boards and painted on the outside. The trail was kept in good

condition as also the telephone line. Boundary Bald Mountain tower was painted and the trail kept in good condition. The telephone service poor.

L. P. Barney, Moose River territory—During past season we built a watchman's camp, 14 x 14 on the top of Kibbie Mountain making very fine quarters. We also repaired telephone line and trails to both Kibbie and Williams Mts.

Louis Oakes, Moosehead Lake territory—Prompt communication between the three stations in my territory and between each station and parties living in vicinity of where small fires started from prevented the spreading of such fires beyond control. During the wet weather this summer the men in charge of lookout stations improved the conditions of their telephone lines, trails and camps, as much as possible.

Frank Hilton, Kennebec River territory, Somerset county—I have laid insulated wire over the ledge at Bald Mt. to the lookout which greatly improves the telephone service. The lookouts on Bald Mt. and Mt. Coburn have been painted and in the latter case papered inside.

The great improvement work in this territory has been the cleaning up of slash. The Moosehead Tel. and Tel. Co. have cleaned their slash from Somerset Junction to Kineo doing a very satisfactory job to the land owners and myself. The Maine Central Railroad has cleaned the slash the whole length of the line from Bingham to Kineo. The town of Moscow has cleaned up practically all along where their slash lay within the limits of the highway.

Fred S. Bunker, Southern part of Hancock County—I have put in one mile of telephone line and a new trail of one mile at no expense to the State. E. S. Bowen of Pawtucket, R. I., who owns land in Nos. 9 & 10, stood the expense of a line from the lookout to his camp which will be of great benefit to the State. The Schoodic Mt. tower has been painted, new batteries installed and all telephone lines put in first class shape.

Fred Houghton, Upper Washington County—There has been no big fires and no heavy damage. This has been accomplished by the good work of my Deputies looking after small fires before it was too late. The ground is well posted with danger notices.

Silas F. Peaslee, Androscoggin watershed, Oxford County—We started in with the view of building a camp at the summit

of Speckle Mt., and a wooden skeleton trestle 24 feet high and instructed the lookout man, during wet periods, to peel the necessary amount of small trees and carry up 2 1-2 M. shingles to shingle the roof of the camp: after which, I proposed to send up a man to build the camp and trestle with the lookout man's assistance. The lookout man peeled a few trees and only carried up one thousand shingles and did not get it any further ahead.

Philander Butts, Territory adjacent to Kingfield, Franklin County—The Sandy River and Rangeley Lakes Railroad has been most carefully gone over and cleared of slash which lessens the danger of fire to a great extent.

C. C. Murphy, Androscoggin watershed in Franklin and Oxford Counties—An effort is being made to get rid of the slash along the highways to reduce the fire risk.

Chief Wardens Recommendations for 1917 Improvements

Claude L. Sawyer, Guerette—For another season the fire station will have to have new bedding and dishes and all telephone lines will have to be repaired.

William E. Brown, Plaisted—The fire station (Hedgehog Mt.) will have to have a spy glass for another season.

J. E. Junkins, Ashland—Next year, the house ought to be put on the steel tower on Norway Bluff and a telephone line constructed from Ashland to Machias Lake. A new lookout should be built on Haystack Mt.

Chas. J. Thibodeau, St. Francis—For the coming year, it will be absolutely necessary that a cook stove be purchased for the camp on the shore of Umsaskis Lake.

I think it would be advisable to build a camp at Cunliffe's Depot on the Allagash River for the purpose of storing our fire fighting tools and it could also be used for a home camp for the patrolmen during the summer season.

Would suggest that an independent wire be run from the mouth of the Allagash river to Long Lake, a distance of about thirty-two miles. I have found it to be very difficult to get good service in this section by using the lumbermen's lines. I would also suggest that the telephone line be extended from the head of Glazier lake to our camp built in 1915 in Twp. 20, R. 11 and 12, on the St. Francis river, a distance of about eighteen miles.

I think it would be advisable to build a new lookout station at Rocky Mt. as the present one is unfit and I think that a steel tower between 30 and 40 feet high would be what is needed.

W. H. Hinckley, Bangor—A telephone should be placed in the tower of the Hardwood Mt. Station the very first thing next season.

Leon C. Irish, Haynesville—The line on Mt. Chase is in very bad condition and should be restrung. Also a floor and windows should be put in the lookout. Also would recommend moving the lookout house a little distance to the north west.

R. L. Brick, Chesuncook—I suggest that there should be an observation station built on Umbazooksus Mt., Saubury Mt. and Pine Stream. Same to be equipped with telephones and field glasses. This would enable the patrolmen to locate and report a fire when Mt. Spencer lookout is unable to do so. There are days when the watchman is above the clouds and the station is practically useless. The stations suggested can be built at a very small expense by using trees for the tower.

There should be galvanized iron shutters for the Spencer Mt. station as protection against wind and hail. Also there is imperative need of a complete hood for the motor boat and a strong battery lamp, as many times, with heavy wind, the patrolman in the boat is obliged to wait until nightfall before getting back to camp. Without a strong light, this is made very dangerous by reason of floating logs, etc., in the lake.

There should be a building built at Ripogenus or Chesuncook Dam suitable for storing the motor boat, tools, etc., and I advise that it be so arranged as to be used in the fire season as a patrolman's camp.

D. H. Lambert, Oldtown—Would recommend that another season there should be a special patrolman to follow up the drives as many fires start from this source. In this territory there is about forty miles of traveled road. There should be a patrolman equipped with a motor cycle to cover this whereas it would take about three men on foot. New dishes and equipment are needed for the watchmen's camps.

C. H. Buswell, Milo—It would be a good plan to continue the line from Yoke Pond to the line of the Great Northern Paper Co. at Crawford pond. In this way the State would have a continuous line from Moosehead to South Twin Lake. Would also advise to connect the Boarstone line with the main line.

John E. Mitchell, Patten—There is need of a boat on Grand and Second Lakes. Something about twenty feet, equipped with an engine for patrolmen's use and for emergency cases in time of fire. Such a boat would pay for itself in a very short time. . . . By the establishing a lookout on Twp. 8, R. 7, country not covered at the present time would be in range and the line up Sebois River could be used in this matter.

I am in favor of a law forbidding the smoking of cigarettes in the woods between the first of May and the 15th of October.

Edwin C. Mooers, Milo—I believe that the State should own all its telephone lines instead of erecting a line jointly with some camp owner, etc. Much valuable time is lost through either a line being overloaded thus causing poor service or else through too many using the line and engaging in long conversations when a watchman is waiting to report a fire. . . . The lumbermen should also be educated up to the fact that the State fire telephone lines must not be broken or damaged during the winter months.

Leroy Brown, Lee—The lookout station needs a new map. On this station, (Cobb Mt.) I think that your plan of paying \$2.00 per day straight time through the fire season would work to best advantage.

George G. Nichols, Jackman—The telephone line that runs to the Boundary Bald Mt. lookout via Heald Pond on the so-called Dutilley Trail should be removed from same to the Jackman Lumber Co's R. R. track and placed on their telephone poles without charge. As it is now, the service is very poor and cannot be bettered except in the above way. . . . It would be a great improvement to have a gasolene boat at Jackman as we have a stretch of water-way of about twenty-five miles which is navigable for a motor boat. This would do away with the delay that is now experienced in getting transportation to a fire.

L. P. Barney, Tarratine—All buildings and towers should be painted in the Spring of 1917.

Louis Oakes, Greenville Junction—Squaw Mt: A roofed over tower about 15 feet high, constructed of wood, with windows in the four sides. Kineo Mt.: A steel tower 50 feet high which would permit watchman to be above the dense growth of trees which cover the summit. This is very important for in this vicinity there are a great number of fishermen, hunters

and campers. Lily Bay Mt.: A tower should be built about 30 feet high, either of wood or iron. It would be possible to get lumber adjacent to the lookout for the purpose.

Frank Hilton, Bingham—The State should have a line of its own to connect The Forks central office with Lake Moxie. I believe that it would be an excellent move if the Maine Central R. R. Co. would furnish the Chief Warden with a motor car as through the early part of the season the fire danger is great and the train service poor up to the last of June. . . . The lumbermen who load lumber on a car should clean up when they get through as they often leave a dangerous fire risk by not doing so. . . . For the benefit of the land-owners who allow campers to go on their lands, they should notify the Chief Warden that he in turn might instruct the watchmen of their whereabouts, so that a close watch could be maintained over them. Lumbermen should do likewise as much expense is incurred in investigating fires reported that prove to be of the nature as described above.

Fred Houghton, Topsfield—The roads need the bushes cut and the brush and logs piled back. Many of the Plantation roads in this section of Washington County are in this condition and are a bad fire menace.

Silas F. Peaslee, Upton—Would advise having a more convenient telephone communication for the patrolman on Twp. 4, Range 2, W. B. K. P., Oxford County.

I would also, as heretofore, mention that I think it very important to have patrolmen continuously on places where there is much inflammable material.

Philander Butts, Kingfield—Would suggest a fire station on Mt. Abram which would be a great improvement to this territory.



Watchman's camp, built in 1915, on Haystack Mt., Twp. 11 R. 4,
W. E. L. S. Aroostook Co.

Forest Fires 1916 on Unincorporated Townships.

AROOOSTOOK COUNTY.

TOWNSHIP.	Date	Acres	GROWTH	CAUSE	Cost to State of ex- tinguishing.	
					DAMAGE	
Twp. 10 R. 3, W. E. L. S. and Monticello	May 14	150	Spruce and burnt land	Doubtful—camp-fire	\$100 00	\$68 14
Twp. C. R. 2, W. E. L. S.	May 14	350	Burnt land	Boys burning woodchuck hole	1,250 00	224 05
Twp. 14 R. 7, W. E. L. S.	May 15	80	Burnt land	B. and A. locomotive	400 00	34 37
Twp. 15 R. 7, W. E. L. S. (Winterville)	July 16	3	Mixed—cut over 1915	Fishermen	0	16 00
Twp. 15 R. 2, W. E. L. S.	July 17	1	Spruce	Lumberman's camp burned	100 00	86 75
Twp. 9 R. 5, W. E. L. S.	Aug. 11	6	Pine and fir	Unknown	100 00	32 50
Twp. 15 R. 5 W. E. L. S. (Westmanland)	Aug. 23	not stated	Not stated	Unknown	500 00	6 30
Twp. 15 R. 4, W. E. L. S.	Aug. 24	3	Spruce	Camp fire	30 00	52 50
Twp. 10 R. 6, W. E. L. S.	Aug. 31	3	Second growth	Unknown	10 00	4 50
Twp. 10 R. 4, W. E. L. S.	Aug. 31	4	Not stated	Fishermen	0	16 00
Twp. 10 R. 9, W. E. L. S.	Sept. 18	3	Not stated	Clearing land	15 00	12 50
Twp. 14 R. 14, W. E. L. S.	Sept. 21	4	Old camp ground	Unknown	0	0
Twp. 13 R. 12, W. E. L. S.	Sept. 22	1-16	Spruce and fir	Lumbermen	0	0
Total		599 7-16				

FRANKLIN COUNTY.

	May 15	25	Burnt land	Drivers smoking		
Twp. 1 R. 7, W. B. K. P.				0	54 00	

Forest Fires 1916 on Unincorporated Townships—Concluded.

HANCOCK COUNTY

TOWNSHIPS	Date	Acres	GROWTH	CAUSE	Damage	Cost to the State of extinguishing.
No. 33 P.	May 3	2	Burnt land.....	Blueberry fire.....	\$5.00	5 90
Twp. 22 M. D.	May 8	250	Old burn.....	Blueberry fire.....	200.00	7 50
Twp. 10 S. D.	May 12	250	Mixed.....	Unknown.....	750.00	60 12
Twp. 22 M. D.	May 14	2,500	Burned land and 50 acres black growth	Blueberry fire.....	250.00	743 43
Twp. 22 M. D.	May 14	800	Mostly burned land, some second growth	Blueberry fire.....	400.00	124 00
Twp. 16 M. D.	May 14	not stated	Old burn.....	Blueberry fire.....	not stated	16 25
Twp. 32 M. D.	May 21	20	Poplar and birch	Unknown.....	20.00	7 50
No. 33 P.	May 21	25	Small birches.....	Unknown.....	50.00	15 75
No. 10 S. D.	Nov. 5	2	Mixed.....	Unknown.....	0	4 75
Totals		3,849			1,675.00	

PENOBSQUIT COUNTY

Twp. 3 R. S. W. E. L. S.	Apr. 30	5	Old burn.....	Unknown.....	0	3 00
Twp. 4 R. 7 W. E. L. S.	May 6	10	Meadow.....	Unknown.....	0	2 50
Twp. 6 R. 8 W. E. L. S.	May 7	100	Old burn.....	Camp fire.....	0	0
Twp. 5 R. 7 W. E. L. S.	May 7	500	Burnt land 400 A.....	Drivers smoking.....	350.00	344 88
Hopkins Academy Grant			Green growth 100 A.....			
Twp. 5 R. 7 W. E. L. S.	May 8	500	Burnt land.....	Unknown.....	500.00	222 67
Twp. 1 R. 8 W. E. L. S.	May 13	60	Meadow, spruce, fir, and pine	Cigarette.....	75.00	4 00
Twp. Indian 4,.....	Sept. 11	2	Spruce and pine	Camps burning.....	0	34 80
	Oct. 11	4	Mixed.....	Unknown.....	0	29 14
Totals		1,181			8925.00	

PISCATAQUIS COUNTY

Barnard Pl.	May 14	10	Soft wood—cut hard.....	Fishermen.....	48 56
Twp. 3 R. 12 W. E. L. S.	June 3	300	New cutting.....	River drivers.....	300 00
Twp. 3 R. 12 W. E. L. S.	July 1	1	Fir bushes.....	Camp fire.....	0 0
Twp. 7 R. 13 W. E. L. S.	Aug. 4	4	Fir bushes.....	Lightning.....	194 43
Twp. 6 R. 10 W. E. L. S.	Aug. 15	10	Mostly burned land, some fir.....	By men who left lumber camps.....	17 83
Twp. 8 R. 13 W. E. L. S.	Sept. 7	1-16	spruce, hemlock birch and alders.....	Camp fire.....	8 50
Totals		3215-16			122 84

SOMERSET COUNTY

Moxie Gore	May 8	300	Soft wood.....	M. C. R. R. locomotive.....	1,500 00
Indian Pond	May 10	not stated	Not stated.....	M. C. R. R. locomotive.....	not given
Carry Town	Aug. 1	4	Mixed—old cutting.....	Unknown.....	132 35
Long Pond	Aug. 20	25	Spruce.....	Unknown.....	12 60
Caratunk Pl (on Moscow line)	Oct. 25	25	Mixed.....	Unknown.....	
Totals		350 4			

WASHINGTON COUNTY

Twp. 27 E. D.	May 4	200	Birch, poplar, spruce and pine	Set by parties unknown.....	200 00
No. 21 Pl.	May 8	300	Burnt land.....	Not given.....	300 00
Twp. 26 E. D.	May 9	25	Spruce, pine and hardwood.....	Unknown.....	50 00
No. 21 Pl.	May 11	300	Burnt land.....	Unknown.....	50 00
Twp. 27 E. D.	May 13	1	Spruce, pine and fir.....	Camp fire.....	197 35
Twp. 19 M. D.	May 13	1000	Gray birch, swamp and few	Blueberry fire.....	5 00
Brookton	May 13	2	Hardwood.....	Pine.....	250 00
II R. 3 N. B. P. P.	May 14	2	Birch and scrub pine.....	River drivers.....	57 70
No. 18 Pl.	May 14	25	Hardwood, spruce and fir.....	Camp fire.....	10 00
Cooper	May 14	75	Gray birch.....	Camp meadow.....	15 25
Twp. 6 N. D.	Oct. 5	4	Not stated.....	Camp fire.....	50 00
Twp. 3 R. 1, T. S.	Oct. 8	1	Second birch and poplar.....	Lumber camp burned.....	13 00
Totals		1,931 4		Gun wads or cigarette.....	24 40
					200 00
					17 75
					20 00
					10 00
					1,195 00

Unincorporated Townships.

SUMMARY OF 1916 FIRES

County.	Acreage.	Damage.
Aroostook.....	599 7-16	\$ 2,505 00
Franklin.....	25	0
Hancock.....	3,849	1,675 00
Penobscot.....	1,181	925 00
Piscataquis.....	321 5-16	325 00
Somersct.....	350 $\frac{1}{4}$	2,835 00
Washington.....	1,931 $\frac{1}{4}$	1,195 00
 Totals	 8,257 $\frac{1}{4}$	 \$ 9,460 00

Forest Fires 1916 on Incorporated Towns as Reported by Municipal Officers.

AROOSTOOK COUNTY.

TOWN.	DATE.	ACRES.	CAUSE.	DAMAGE.
Bancroft.....	May 7	500	Fishermen.....	\$200
Monticello.....	May 14	28	Unknown.....	75
Weston.....	May 14	20	Boys fishing.....	20
Monticello.....	June 3	4	Clearing land.....	10
Total		548 ¹		\$305

CUMBERLAND COUNTY.

Pownal.....	May 11	200	Bonfire or pipe.....	\$100
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FRANKLIN COUNTY

Rangeley.....	Aug. 1	5 sq. rods	Unknown.....	no damage
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LINCOLN COUNTY

Boothbay Harbor.....	May 9	2	Portable saw-mill.....	\$50
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OXFORD COUNTY

Brownfield.....	May 11	210	Brush fire.....	\$2,400
Brownfield.....	May 13	18	Unknown.....	100
Hiram.....	May 11	13	Brush fire in Brownfield.....	100
Porter.....	May 11	300	Burning brush.....	2,000
Sweden.....	May 11	50	Portable mill.....	175
Total		591		\$4,775

WALDO COUNTY

Lincolnville.....	May 13	10	Roadside fire.....	\$50
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WASHINGTON COUNTY.

Cherryfield.....	May 14	1,800	Unknown.....	\$3,600
Charlotte.....	May 12	75	Unknown.....	375
Total		1,875		\$3,975

YORK COUNTY.

Biddeford.....	May 2	30	Smoker.....	0
Biddeford.....	May 10	3	Smoker.....	50
Biddeford.....	May 11	100	Spark from camp.....	1,000
Total		133		\$1,050

Summary Forest Fires in Incorporated Towns, 1916.

COUNTY.	ACREAGE.	DAMAGE.
Aroostook.....	548 $\frac{1}{4}$	\$305
Cumberland.....	200.....	100
Franklin.....	5 sq. rods.....	no damage
Lincoln.....	2.....	50
Oxford.....	591.....	4,775
Waldo.....	10.....	50
Washington.....	1,875.....	3,975
York.....	133.....	1,050
Total.....	3,359 +.....	\$10,305

BENJAMIN C. JORDAN FUND.

At the session of the Legislature of 1909 Benjamin C. Jordan, of Alfred, who for many years has been interested in conserving the timber lands of Maine, presented to the members the unique proposition of giving to the state the sum of \$1,000.00. The conditions of said gift are set forth in the following proposition, signed by Mr. Jordan:

I would like to give to the State of Maine, to be its property forever, one thousand dollars, on condition that in consideration of said gift the state shall, once in 18 years, offer five prizes to be called the Jordan Forestry Prizes, as follows:

\$500.00	1st	prize
\$250.00	2d	"
\$125.00	3d	"
\$100.00	4th	"
\$25.00	5th	"

Said prizes to be offered now by the State for the five best lots of young forest growth in the State and awarded by the State Forest Commissioner subject to the approval of the Governor, January 1st, 1927, and once in 18 years afterward forever, after a careful examination of all lots competing in accordance with the following rules:

Rule 1. Each lot shall consist of one parcel of not less than ten acres in somewhat regular shape and shall be accurately surveyed and plotted.

Rule 2. The majority of said trees shall not be less than ten feet nor more than thirty feet high and not less than ten nor more than thirty years old when the prize is awarded.

Rule 3. Said forest may consist of any of the following kinds of trees, but other circumstances and conditions being equal, preference shall be given in the following order: White Pine, White Oak, Hickory, Chestnut, Hacmatack, White Ash, Yellow Oak, Red Oak, Bass, Hemlock, Spruce, Norway Pine, Pitch Pine, Cedar, Fir, Poplar, Birch, Maple, Beech and Elm.

Rule 4. All competitors for the prizes shall file in the office of the State Forest Commissioner, their intention to compete, together with a correct and definite survey and plan of the lot, ten or more years before each award, and when such notice has been filed, said lot shall be eligible although the ownership may have changed.

Rule 5. Myself and my heirs shall have the same right as others to compete for the prizes.

Rule 6. In awarding prizes, other circumstances being equal, the following conditions shall be considered in the order named:

(a) Right number of trees per acre. (b) Even distribution over whole lot. (c) Health and thriftiness of trees. (d) Adaptation of the varieties of trees to the soil in which they stand. (e) Uniformity of size of trees. (f) Size of trees. (g) Size of the lot.

BENJAMIN C. JORDAN.

Alfred, Maine, January 14, 1909.

In accepting the offer the Legislature passed the following resolve:

Resolved, That the offer of Benjamin C. Jordan, of Alfred, Maine, giving to the State of Maine, one thousand dollars, to be known as the Jordan fund, conditions of which are herewith annexed, be hereby accepted, and the conditions of which shall be carried out by the State Forest Commissioner.

The \$1,000.00 was deposited with the state treasurer by Mr. Jordan, as required during the year 1909.

During the years 1915-16 one competitor has filed his intentions of competing for this prize as per the following letter.

HARDWICK, MASS., Dec. 26, 1916.

*Mr. Frank E. Mace,
Forest Commissioner,
Augusta, Maine.*

DEAR SIR:

I hereby file my intention of competing for one of the prizes offered by the Benjamin C. Jordan Fund. This lot is situated on my farm in Biddeford. It was originally a pasture with a small timber lot in one corner.

The heavy timber was cut off in 1902. A few standing pine have practically seeded the pasture of some twenty acres. I am thinning out the trees to the proper distance apart and expect to remove the larger and imperfect trees. There are a few hemlock trees on the lot but practically all are white pine.

Under another cover I am mailing you today a plan of my woodlot in Biddeford, Maine.

Will you kindly advise me of the receipt of the application and of the plan?

Sincerely yours,

HOWARD GILPATRICK.

REPORT OF THE DEPARTMENT OF PUBLIC INSTRUCTION IN FORESTRY AT THE UNIVERSITY OF MAINE.

To the Honorable Frank E. Mace, Forest Commissioner, Augusta, Maine.

SIR:—I have the honor to submit the following report of this Department for the years 1915 and 1916:

During the past two years the Department has been more than ever able to carry into effective operation the purpose for which it was created, namely to awaken an interest in behalf of forestry in the schools, academies and colleges of the State, and to give instruction on the care, protection, utilization and reproduction of forest crops.

Besides the regular four years' curriculum for students majoring in forestry, short courses have been offered for agricultural students and others at the University of Maine; lectures have been given at the normal schools as well as at various high schools, clubs and granges throughout the State; and the summer school camp has proved to be a means of reaching others who could probably not be interested in the subject in any other way. An important development during this period has been in the field of extension work among the farmers and small woodlot owners of the State. While so far it has not been possible to employ a special man for this work, the beginnings made by Professor Eaton in this line have been very satisfactory, and it is hoped that the facilities for carrying it on will be increased in the future. It seems to be one of the very best means of reaching this important class of timber land owners, and the way in which it has been received shows that there is a large and important field for just this sort of educational work in Maine. The Forest Nursery has also been a means of interesting many owners in the possibilities of planting, and it has been instrumental in establishing plantations in all but two counties during this comparatively brief period.

REGISTRATION.

There are now forty-three students majoring in forestry at the University of Maine. This does not include the men who attend short courses, either at the University or at the summer school camp. The relative standing of these men is as follows:

Seniors	6
Juniors	8
Sophomores	11
Freshmen	16
Specials	2
<hr/>	
Total	43

All of these men expect to make forestry their profession and life work, and they will either go directly into some branch of the work upon graduation, or will continue their studies at some post-graduate school of forestry, where they can obtain advanced standing and credits for a part of their work done at Maine. The courses here now are on a par with any of the four-year-undergraduate courses offered in this country.

DEGREES AND GRADUATES.

The degree of Bachelor of Science in Forestry was awarded to seven men in 1915, and to two men in 1916. Of these all but one are now actively engaged in some form of forestry work, and the other one is temporarily employed in another line of work but expects to return to the practice of forestry before long. Two men out of the present senior class made the highest honor obtainable in the University: an election to the honorary society of Phi Kappa Phi.

COURSES.

A course in Woodlot Forestry has been added to the list of courses offered in the spring semester of each year, and a course in Lumber and Its Uses is now given each fall semester. These are open to all students desiring to elect them. The course in Economics of Forestry has been made a required course for all students majoring in forestry, and is also elective for others. The course in Lumbering has been made continuous throughout the fall semester, and an added course in Lumbering Field

Work has been added. This latter requires six hours a week practical work at the mills and manufacturing plants in and near Orono, as well as an inspection trip and report on a logging operation during the winter.

In addition to the requirements of the prescribed curriculum, students majoring in forestry are now required to serve an apprenticeship before their names will be presented and recommended for graduation. This apprenticeship consists of not less than ten weeks practical work in the woods with an individual, firm or corporation approved by the Department. No credit in hours is given for this work, but compensation is permitted. It has been found impractical to require the attendance of the students for a whole summer term's work, since many of them use this time to earn money to defray either the whole or a part of their college expenses for the rest of the year.

The introduction of the course in Pulp and Paper, by the Department of Chemistry, has brought a new group of students in touch with this Department. All of these students are required to take courses in forestry in connection with their work, including economics of forestry and forest products. Special lectures are always given at the Farmers' Week conference, and the short winter courses in Horticulture and Agronomy. With these exceptions, only minor changes have been made in the curriculum as formerly reported in detail.

PUBLICATIONS.

Besides numerous minor articles and publications, the most important publications of the Department during the past two years are: "Handling the Farm Woodlot," Extension Bulletin No. 105, by Carleton W. Eaton; and "Tree Planting, An Arbor-Day Handbook for use in Maine Schools," by John M. Briscoe. The former was published by the University of Maine Extension Service in cooperation with this Department; and the latter was published from the funds for public instruction in forestry, and was distributed to the schools through the office of the Superintendent of Schools in cooperation with the Forest Commissioner. Both of these have been very well received by the general public, and several commendatory letters and notices appeared concerning them, and additional copies have

been much in demand. Copies of these are appended and made a part of this report.

EQUIPMENT.

The equipment has been augmented to keep pace with the increase in the number of students. Among the later acquisitions may be mentioned traverse-boards, pantographs, tripods, jacob staffs, compasses and tapes. A considerable addition has been made to the collection of lantern slides used for illustrating lectures, and a sectional lantern slide cabinet has been installed to store these in the most convenient manner so that they may be available on a moment's notice. A new and improved Balopticon has also been installed. This has the advantage of being equally useful for the projection of lantern slides and opaque objects on the screen, and the illumination is furnished by an incandescent 1,000 candle power lamp, which is entirely noiseless in operation and is in every way more economical than the old style steriopticon.

EXTENSION.

The object of the extension work is to aid the farmer and woodlot owner in getting a maximum yield from his wooded area and to induce him to make his waste land productive. In furtherance of this object the Extension Department and the Forestry Department have cooperated in establishing demonstrations, giving advice, conducting investigative work, and assisting in establishing plantations.

Woodlot demonstrations now established have the following objects: To show the advantage of making thinnings in young and growing stands; to increase the proportion of valuable species that grow to merchantable size in a mixed stand, to show the practicability and financial profit in forest planting; and to demonstrate that the work can be handled successfully by the average woodlot owner without any special technical training.

Four woodlots have been secured for thinning demonstrations. Three of these are in the southwestern part of the State in young pine stands. In one old field pines are being removed from among the younger even-aged trees. These old field pines have wide spreading branches that overtop the younger trees, and occupy more than their share of the ground. Additional growth

may be expected in the surrounding trees after this thinning, and the seeding that should naturally follow will give more trees and lumber of a better quality than could have been obtained from the original stand without treatment.

Other pine thinnings have been made in even-aged crowded stands. In these from one-fourth to one-third of the trees were removed, they being for the most part the stunted and poorest ones. On one of these stands an increase in growth has already been noted, and a detailed study is being made of it. Although many trees were removed in thinning this area, it still has a heavier growth than exists on some of the neighboring un-thinned stands of similar character. The trees have been prevented from killing each other off by over-crowding, and each of the remaining trees in the stand has been given sufficient light and soil moisture to favor maximum growth. Further thinnings will be made on these areas as the trees grow and begin to crowd each other.

A thinning in young hardwood growth has been made, with the object of increasing the number of basswood trees that will come to merchantable size. Saplings of less valuable species were removed wherever they were crowding the basswood.

Another woodlot of considerable size and varying conditions was placed under management. Here twelve acres had been stripped of softwoods several years ago, and these were planted to white pine this spring. Instead of waste and cut over land, it is now in productive condition.

Several demonstrations have been established with the making of liberation thinnings. This consists is removing the inferior species that are overcrowding and killing back more valuable trees.

In stands where birch and pine were crowded together, the birch was removed in order to open up the pine to light, give the roots more room in the soil, and keep the tops of the pine from being killed by the thrashing of the birch branches.

Besides this several thinnings and plantings have been conducted independently by woodlot owners, and these are under observation and results will be available for later publication. Advice has been given to many individuals, both verbally and by letter, and assistance has been given in handling planting work in various parts of the State.

At the University, a demonstration cutting has been conducted in the college woodlot. Two acres have been clear-cut since the trees there are reaching maturity, and in the spring this was replanted to white pine, (*Pinus strobus*). Underplanting was also done in another part of the woodlot, where red pine (*Pinus resinosa*) was planted in open places made by the falling out of over-mature trees. From this area the following figures are available:

Cut 18,000 feet B. M. and 4 1-2 cords lath wood. Value	\$385 50
Cost of logging	\$158 41
Cost of milling	91 80
<hr/>	
Net profit	135 29

It must be remembered that growth on these two acres was very sparse, since the trees were already over-mature. The cut from the plantation should be about four and one-half times as much as this.

The cost of planting was as follows:

Cost of burning brush	\$2 00
Cost of plants (2,500)	13 13
Labor (Value-Student)	2 75
<hr/>	
Total	\$17 88

or an average of \$8.94 per acre.

Experiments have now been established at the following locations: North Berwick, Waterford, Waterboro, South Waterboro, Charleston, and Orono, and another is now being undertaken in cooperation with the Maine Agricultural Experiment Station, in connection with the woodlot at the Aroostook Farm near Presque Isle.

Applications for other demonstrations have also been received from the following locations: Bowdoinham, Buckfield, Cornelia, Dover, Gardiner, Limerick, Farmington Falls, Milo, Manchester and South Brewer.

A recently made canvass of the wooded area in New England shows that some 30 per cent of the entire area, or more than 11,500,000 acres is in woodlots owned by farmers. About one-third of this area is at present covered with worthless scrub growth, and of the remaining two-thirds, less than 2 per cent

is intelligently managed for the production of tree crops. The only cure for this condition of affairs consists in vigorously pursuing the educational work in forestry, and so bringing it to the attention of the owners. As a rule the owner is very willing to practice the best forestry that he can, if he only is advised how to go about it properly. In most such cases the practice of forestry is more of an investment than an expense.

In this connection it has been suggested that courses in forestry should be required as a part of the curriculum of every student in a college or university receiving state or government aid; that men with at least an elementary training in forestry be chosen as county agents under the Smith-Lever Law; and that special state agents, experts in woodlot forestry, be appointed under this same law in every state where wood lot forestry is an important factor, as it certainly is in Maine.

FOREST NURSERY.

Much of the earlier appropriations for the State Forest Nursery were needed for the construction of the tool and packing house, for the installation of the water system, and for the purchase of equipment and supplies; and no funds were available until after the first of July, 1913, so that no planting on an extensive scale was possible that year. Since it takes three years to grow the plants to a condition for field-planting, few were ready for sale and distribution in the spring of 1916. However, some few seed-beds had been started by the class in silviculture, in the hopes that the funds would later be available, and from these small beginnings, some 15,000 trees were ready for the market and were sold this spring. These together with some larger stock already on hand, brought in \$96.49 to the credit of this account.

By next spring there will be some 55,000 white pine and 10,000 Norway spruce ready for the market, and after that time the supply will in all probability be equal to the demand. It was thought best to go a little slowly at first, in order to find out just what the demand would be for this stock, but the demand has so far exceeded both the supply and even the expectations of the most hopeful, that it became necessary to purchase more than 150,000 white pine and 5,000 spruce from outside sources so as not to disappoint prospective customers in filling orders for

planting stock. This stock was purchased at a flat rate of \$5.25 per 1,000, and was billed directly to the purchasers at exactly the same figure. The large quantity ordered at one time, and the guarantee of payment making it possible to get a price that could not have been obtained on small lots by individual purchasers, and it saved unnecessary delays and uncertainties that might have had a discouraging effect on those intending to establish plantations. The stock was of excellent quality and gave universal satisfaction to the customers.

At the present time there are more than 300,000 seedlings in the nursery from this year's planting (1916), counting both pine and spruce, so that it will not be difficult to maintain an average annual production of from 200,000 to 250,000 three-year-old transplants for 1918 and thereafter.

In all some 175,000 trees were planted in over 40 different localities throughout the State, through the agency of the Forest Nursery in the spring of 1916. This means an area of nearly 150 acres reforested and now in productive condition, reclaimed from the waste lands of the State.

Figures gathered from the planters show that the average cost of planting, including stock, delivery, actual planting, and all other incidental expenses properly chargeable to the account, was \$11.24 per 1,000 plants, or a trifle over one cent each. For the most part these costs ran remarkably uniform, the lowest being \$7.60 and the highest \$14.25, both of these figures being for a plantation of a single 1,000, while the costs for lots of 5,000 or more ran from \$9.80 to \$10.65 per 1,000.

It is the intention to sell three-year-old transplants of either pine or spruce at a flat rate of \$5.00 per 1,000 in the spring of 1917, and we already have orders for more than 35,000 trees.

If the receipts from the sale of planting stock from the Forest Nursery are to be turned over to the State Treasury as has been the case in the past, provision will have to be made for a small annual appropriation for this account; but if these sales can be credited to a special account for that purpose and allowed to accumulate and be drawn upon for necessary labor and supplies, this work will soon become self-supporting.

The stock now on hand in the Forest Nursery includes the following:

Three-year-old transplants, (Ready for market 1917)	White pine	55,000
	Norway spruce	10,000
Two-year-old seedlings, (Ready for market 1918)	White pine	85,000
	Norway spruce	15,000
	Red pine	1,000
	Austrian pine	1,000
	Blue spruce	5,000
One-year-old seedlings, (Ready for market 1919)	White pine	180,000
	Norway spruce	170,000
	Red pine	9,500
		<hr/>
	Total	531,500

In addition to the above stock there are a number of larger transplants of extra sized stock, set aside chiefly for decorative planting, since the Nursery is frequently called upon to supply a few trees of larger size for this purpose. These trees range from 18 inches to 7 feet in height, and are sold according to size and species at from ten cents to one dollar each. The following species are now available in this stock: White pine, pitch pine, Norway spruce, white spruce, red spruce, Douglas fir, balsam fir, ailanthus, butternut, black cherry and black locust.

In consideration of the reduced price at which the stock is sold, the purchaser agrees to the following conditions which are printed on the reverse side of the order blank which is signed by the customer and are made a part of the contract:

1. The trees purchased shall be used only for the purpose of planting lands in the State of Maine
2. The trees shall not be resold or offered for sale before being planted by the purchaser or his agents.
3. The trees shall be properly planted with due care not to allow the drying out of the roots.
4. Reports shall be furnished when requested, upon the condition and growth of the plantations.
5. Cash or money-order for the amount of the purchase shall accompany the order, or be collected on delivery.

Experiments have been started in the growing of poplar from cuttings. During the spring planting season of 1917, some 1,200 cuttings of poplars of various species were planted in the

nursery and also in the woods in the vicinity. It is too soon to make any definite report on these, but the majority of them have done well, and some species have made very remarkable growth for the first year. Two problems are under consideration in this experiment: (1) The winter hardiness of the various species and, (2) the rate of growth of each.

The poplar cuttings used in these experiments were furnished gratis by the Bureau of Plant Industry and the Forest Service, both branches of the United States Department of Agriculture.

Poplar wood for pulp is becoming dearer and more difficult to obtain each year, and if poplars can be propagated by the planting of cuttings on ordinary forest sites without any previous expense as to the preparation of the site, it will be one of the best tree crops for the woodlot owner. The rate of growth is much more rapid than is that of any of the coniferous species, and it reaches merchantable size when grown in plantations at between fifteen and twenty years. The price obtained for the wood compares very favorably also with that for other pulp woods.

In the Forest Nursery we now have a valuable asset for the State as well as for the Department of Forestry. It has been of great advantage to the students in silviculture in as much as it gives them excellent practical work in this line on an extensive scale. They are now able to take an active part in every operation, from the collecting and sowing of seed to the packing and shipping of the three-year-old transplants, as well as setting out plantations in and near Orono. The use of student labor considerably reduces the cost of production, and as a consequence the trees can be put on the market at a lower figure than would otherwise be possible. That the men also profit by the experience so gained is shown by the fact that several graduates have secured positions with large commercial forest nurseries, and are making a specialty of this line of work.

The potential value of the Forest Nursery to the State as a whole can not be overestimated, for it means the planting of from 250,000 to 500,000 trees, or the reforesting of from 200 to 500 acres per annum for the production of our future supply of timber.

Respectfully submitted,
JOHN M. BRISCOE,
Professor of Forestry.

1 November, 1916.

HANDLING THE FARM WOODLOT.

By CARLETON W. EATON, Assistant Professor of Forestry.

Contribution from the Forestry Department,
University of Maine.

JOHN M. BRISCOE, Professor of Forestry.

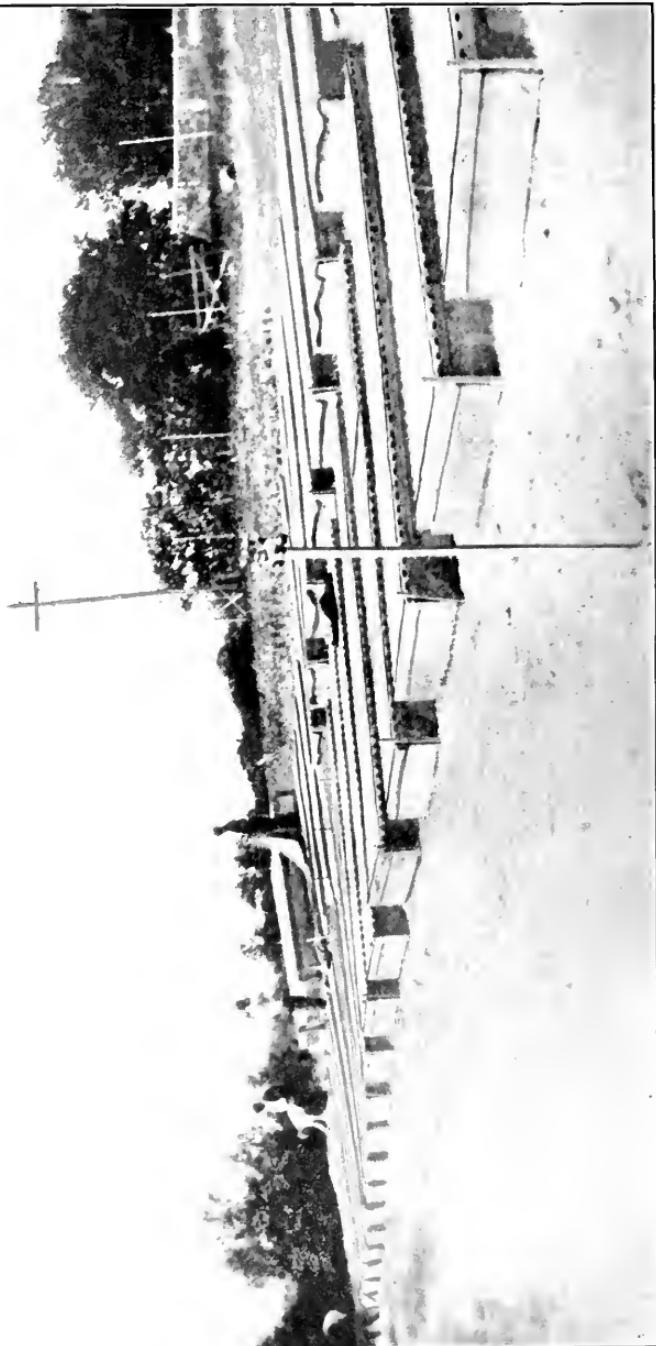
The woodlot has always been one of the Maine farmer's chief assets. It is the source from which he derives nearly 20% of his income. The value of woodlot products increased 110% between 1900 and 1910. This value and the amount of cutting are constantly increasing, and now there is universal recognition of the fact that woodlots must be given some attention and care.

Many inquiries have been received by the Extension service in regard to estimating timber and log scaling and it is the purpose of this bulletin to present this information in as practical a form as possible. It must be recognized however that to make a close estimate of the contents of standing trees sound training and experience are necessary, and log scaling becomes difficult when much defect is found in the logs. Careful use of the volume table method of estimating should give the estimator a reasonably close figure even though he has not had previous experience, and the rule method should give him a means of getting a quick approximation. The latter method is best applied to pine and trees of good size. It is hoped that the bulletin will provide the woodlot owner with a better means of estimating his timber and suggest methods of selling timber to greater advantage.

SELLING WOODLOT TIMBER.

Woodlot timber is constantly being sold for less than its true value. There are many cases where it has been practically given away or sold for less than half what it was worth. The reason for this lies in the method by which it is sold.

The easiest way in which the woodlot owner can throw away money is to sell his stumpage at a price per acre, or for a lump sum for the whole stand, without knowing pretty close how



Seedbeds in Forest Nursery, University of Maine, showing lath screens for light and moisture regulation and wire screens for protection from birds and rodents.

much the stand will saw out. A portable mill operator or timber speculator offers the owner perhaps \$2,000 for his standing timber. The owner of the timber lot doesn't know how much there is on it, the money offered "looks big," it is needed perhaps, and he accepts the offer. In many cases it was shown that following this plan his loss was at least fifty per cent. The increase in the value of good saw material, and its scarcity, makes it possible for the woodlot owner to exact other methods of purchase. The above method should always be avoided.

Timber should be sold by actual scale either of the log or of the boards after sawing. Measurement of the boards after coming from the saw is the best way, when it can be done. By this method every board foot is accounted for, and no allowances are made. Scale of the log is the more common method of measuring lumber, and is generally satisfactory to both parties. The logs are scaled after cutting, either in the woods or at the mill. The Maine log rule is a very good one when properly used. Stumpage value, or the price which the woodlot owner should receive per thousand board feet, may be figured by deducting from the market value of the sawed lumber the total costs of logging, milling, and taking to market, plus a fair rate of profit to the millman. A fair log scale, and proper adjustment of the stumpage values will safeguard the interests of the woodlot owner and be satisfactory to the purchaser of the timber.

Selling timber by the lot generally has the further disadvantage of allowing the operator to slash the young growth and leave the land in a condition ripe for fire and unproductive of more timber. Therefore in addition to selling the timber on an actual log scale basis the woodlot owner should also insist upon some restrictions in logging. It is not necessary to impose brush piling and burning, etc., upon the operator—unless the owner wants to lower the stumpage rate, but good average care and complete utilization of all material that is merchantable will not be too much of a burden on the millman and it will leave the ground in very much better condition.

ESTIMATING STANDING TIMBER.

Many times the woodlot owner would like to have some idea of the amount of standing timber he has in his lot. The fol-

lowing method will give an approximate estimate without the use of instruments and does not require much previous experience. However, the estimate will be more accurate if surveying and measuring instruments are used, and if the estimator has had some experience in sizing up timber.

The method requires a knowledge of the number of acres in the woodlot. The more accurately this is known the better will be the estimate. It may be found roughly by pacing.

A chain is four rods long, or 66 feet.

There are ten square chains in an acre.

There are 160 square rods or 43,560 square feet in an acre.

A square acre is 208.7 feet on a side.

A quarter acre is 104.3 feet on a side.

A quarter acre circle has a radius of 59 feet.

Knowing the total number of acres in the woodlot it is necessary to find the average amount of timber standing per acre. To find this average run per acre cruise through the woodlot and select a number of quarter acre plots that appear to average up well with the rest of the stand. This plan will be satisfactory where the timber runs uniform. The area of these plots may be estimated by the eye, and checked by pacing or by the tape. A person can estimate a distance of 59 feet from where he stands, in all directions. Count all the trees within this distance. Select a tree that looks to be of average diameter and height. Measure the diameter of this tree at breast height using pocket rule or home made calipers.

To obtain the board foot contents of this tree, estimate the diameter half way up the merchantable length and using the breast height measurement to go by, allow about two inches of taper for each sixteen feet in height. Multiply this diameter by itself, subtract 60 and multiply the difference by 0.8. The answer will give the number of board feet in the average log, so it must finally be multiplied by the number of 16 foot logs in the tree.

Example: A tree calipers, breast high, 20 inches. Looking up the stem it is seen that the tree will cut three 16-foot logs. The diameter halfway up, 24 feet, is estimated at 14 inches. $14 \times 14 - 60$ equals 136. Multiply 136 by 0.8 gives 108.8 board feet—the size of the average log. Multiply this by 3, the number of logs in the tree, and we have the number of board

feet in the tree, 326. Multiplying this figure 326 by the number of trees counted on the plot will give an appropriate estimate of the number of board feet on the quarter acre. Thus if we are estimating pine and have counted 20 trees on the plot, the estimate will be 6,520 feet board measure for the quarter acre. If four or more plots have been taken in this way average the results, and find an average stand for a quarter acre. Multiplying this by four, and then by the number of acres in the woodlot we should have a good idea of what the stand will cut. Estimates must of course be kept separate by species.

ESTIMATING WITH VOLUME TABLES.

If a more accurate estimate is desired it is possible to come very close with the use of volume tables, but it involves more care, more work, and—to get the best results—instruments should be purchased for the work. (Those who care to purchase instruments may obtain data as to their cost and use upon application to this department.)

In using volume tables every tree may be measured at breast height on sample plots taken as in the preceding method, or they may be measured on the whole area to be estimated. The former method is perhaps the easier in practice.

Select the sample plots as before. With a pair of calipers (home made as described later) obtain the breast height diameter of each tree of merchantable size on the plot. Find the total height of several trees of different diameters to the nearest ten feet. This may be done roughly by cutting a ten foot pole and setting it up against the tree, then stand away from the tree and estimate the number of times the pole will go up the stem to the tip of the highest branch. Measure several plots in this way, and the field work is accomplished, provided that the number of acres in the woodlot is known or previously obtained.

The volume table given below is for white pine alone, taken from the N. H. Forestry Report 1905-06, compiled from measurements taken by the U. S. Forest Service and the State of New Hampshire. The table gives the actual saw cut for trees of different diameters breast high and height.

The tables following are for spruce and hardwoods, and should give fairly accurate results for Maine stands.

WHITE PINE VOLUME TABLE.

Diameter, breast-high.	HEIGHT OF TREE (FEET).									
	30	40	50	60	70	80	90	100	110	120
VOLUME (BOARD FEET).										
5	8	12	15	.....	.....	.....	.....	.....	.....	.....
6	13	20	23	27	29	.....	.....	.....	.....	.....
7	18	28	34	39	44	.....	.....	.....	.....	.....
8	24	36	45	53	62	.....	.....	.....	.....	.....
9	32	44	56	69	81	93	.....	.....	.....	.....
10	41	53	70	85	102	119	138	.....	.....	.....
11	.....	63	84	103	126	147	168	.....	.....	.....
12	.....	73	100	125	151	177	200	228	245	.....
13	.....	84	117	148	180	210	238	270	293	.....
14	.....	95	137	173	210	243	277	312	348	.....
15	.....	105	158	200	241	282	321	362	406	.....
16	.....	181	230	277	323	370	415	470	.....	.....
17	.....	209	261	313	368	421	471	540	.....	.....
18	.....	238	297	352	411	475	531	610	688	.....
19	.....	270	336	393	460	530	598	682	763	.....
20	.....	302	379	436	506	583	660	750	840	.....
21	.....	.....	425	480	553	634	720	820	918	.....
22	.....	.....	.....	522	597	681	779	887	990	.....
23	.....	.....	.....	.....	566	639	727	834	958	1,065
24	.....	.....	.....	.....	.....	674	769	889	1,030	1,135
25	.....	.....	.....	.....	.....	706	809	942	1,105	.....
26	.....	.....	.....	.....	.....	737	846	994	1,180	.....
27	.....	.....	.....	.....	.....	.....	1,046	.....	.....	.....

SPRUCE.¹

Volume of unpeeled pulp wood in cubic feet, southern New Hampshire.

Diameter, Breast-high.	HEIGHT OF TREE (FEET).					
	40	50	60	70	80	90
VOLUME (CUBIC FEET).						
<i>Inches.</i>						
5	1.9	2.5	3.0	4.0	5.0	6.0
6	3.5	4.2	5.2	6.4	7.8	9.0
7	5.0	6.2	7.5	9.0	10.5	12.0
8	6.6	8.4	10.0	11.7	13.5	15.0
9	8.5	10.8	12.7	14.8	17.0	19.0
10	10.5	13.5	15.6	18.0	20.5	23.0
11	12.5	16.5	18.8	21.5	24.5	27.0
12	15.0	19.5	22.3	25.4	28.5	31.5
13	17.5	22.0	26.0	29.5	34.5	38.0
14	20.0	26.0	30.0	34.0	39.5	44.0
15	22.5	28.0	34.5	38.5	44.0	49.0
16	25.0	32.0	39.0	43.5	49.0	54.5
17	27.5	35.0	43.5	49.0	55.0	63.5
18	30.0	38.0	48.0	54.5	61.0	70.0
19	32.5	40.0	53.0	60.5	67.5	77.0
20	35.0	42.0	58.0	67.0	74.5	83.5
21	37.5	44.0	62.0	74.0	82.0	90.5
22	40.0	46.0	68.0	81.5	89.0	98.0
23	42.5	48.0	72.0	88.5	96.5	106.0
24	45.0	50.0	76.0	95.5	104.5	114.0
25	47.5	52.0	80.0	102.0	112.0	123.0
26	50.0	54.0	84.0	109.0	120.0	131.5
27	52.5	56.0	88.0	116.0	128.0	140.0
28	55.0	58.0	92.0	135.5	148.5	162.0

To reduce to cords divide by 95.

Bark = 11 per cent. of volume.

¹ From Bulletin 36, U. S. Forest Service.

VOLUME TABLE FOR RED MAPLE IN CORDS—BASED ON MEASUREMENTS TAKEN IN 1910 AND 1911. HARVARD FOREST, PETERSHAM, MASS.

Diameter, breast-high.	TOTAL HEIGHT IN FEET.								
	25	30	35	40	50	60	70	80	90
MERCHANTABLE VOLUME IN CORDS.									
3	.009	.010	.012	.013	.019	...	...	...	...
4	.014	.016	.018	.022	.030	...	...	...	...
5028	.033	.044	.055	...	...	...
6042	.049	.061	.072	.090	...	...
7065	.079	.094	.110	.127	...
8083	.102	.118	.136	.150	...
9101	.128	.147	.164	.179	...
10156	.179	.197	.210	...
11191	.211	.232	.247	...
12230	.241	.270	.288	...
13275	.290	.314	.336	...
14321	.334	.359	.391	.444
15380	.413	.455	...
16434	.471	.529	...
17604	...

Above Table may be used for second growth hardwoods.

From Bulletin of the Harvard Forestry Club, Vol. 11, 1913.

VOLUME TABLE OF OLD GROWTH HARDWOODS.

Diameter, breast-high— Inches.	Beech— Total volume, bd. ft.	Yellow birch— Total volume, bd. ft.	Sugar maple— Total volume, bd. ft.
13	83	59	81
14	115	95	119
15	142	125	142
16	167	146	162
17	189	163	184
18	211	186	207
19	240	217	232
20	275	250	255
21	314	297	283
22	359	331	319
23	414	363	354
24	473	388	382
25		408	410
26		434	430
27		470	445
28		505	447
29		545	
30		588	
31		619	

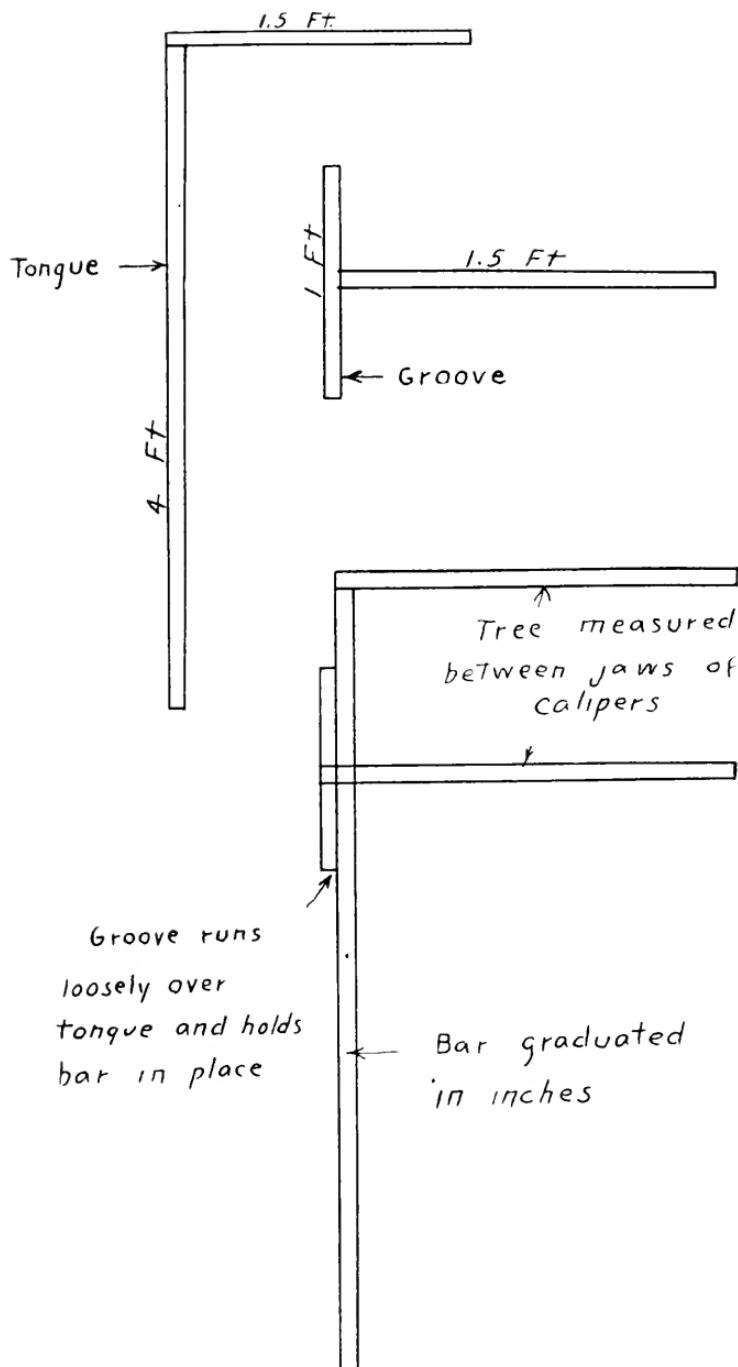
U. S. Dept. Agr., For. Ser. Bul. 36, appendix. This table was made in Herkimer Co., N. Y., from band and circular saws.

The use of these tables is as follows: Referring to the tally of diameters of the trees on one of the quarter acre plots it is found that there are 5 trees of 14 inch diameter. Referring to the figures for the height of trees of different diameters it is seen that a tree 12 inches through is 60 feet high, and a tree 16 inches through is 90 feet high, and that no figure has been taken for 14 inch trees. Assume then that the height of the 14 inch trees is half way between, or 75 feet high, and raise it to 80 feet or drop to 70 feet according to the run of the timber. Referring to the volume table for pine it is seen that the figure for the contents of a tree 14 inches in diameter and 80 feet high is 243. There are 5 trees of this size, therefore 5×243 , or 1,215 board feet, is the cut for trees of this size. Proceed in this way for the trees of each size on the plot, and add the total for the board foot estimate of the quarter acre. Each plot should be reckoned separately, and the estimate for the woodlot obtained from them in the same way as described in the preceding method.

With the use of instruments for obtaining the height of trees and compass and chain for measuring areas, and well made calipers this method becomes very exact for even inexperienced hands. As described above a good approximate estimate should be obtained.

HOME MADE CALIPERS.

To get an accurate measurement of tree diameters a caliper may be made as follows: Take a piece of planed and matched board four feet long. Split it lengthwise, and even off the split edges with the axe or plane. Saw the grooved part into two pieces 1 1-2 feet long. Nail one of these pieces to the side of the long tongued piece at one end, so that it lays across the split edge at right angles to it. Take the remaining grooved pieces and nail them together at right angles, so that the 1-foot part lays across the longer piece at the end with its groove toward the lower end of the cross formed. Cut away in this groove a little so as to widen it out and make it slide easily over the tongue. The two parts will then fit together as in diagram and it will not be found necessary to attach the sliding arm as it can be held by the hand during use. By the use of a pocket rule or yard stick the long bar should then be graduated in inches.



SCALING LOGS.

Logs are scaled in board feet, and cubic feet—or some other solid measure. A board foot scale does not give the solid contents of the log, but the number of sound boards one inch thick a foot wide and a foot long that can be cut from the log. Cubic foot measure gives the number of solid cubic feet of wood in the log, regardless of what merchantable product may be taken from it. Another solid content measure is the standard, which gives the amount of solid wood in the log in terms of pieces of a given size. Board foot scale is usually applied to logs that are to be manufactured into lumber, while cubic foot and standard scales are taken of pulpwood and some other products.

A good board foot scale to use is the Maine or Holland Rule. A good solid content rule is the Blodgett.

BOARD FOOT MEASURE—MAINE RULE.

The Maine or Holland Rule gives the number of inch boards a foot square that may be sawed from logs of different diameters and lengths. The diameter is taken at the top end, inside the bark—no bark should be included. The lengths may be taken to the odd feet, but the logs should be cut at even lengths, so that they will measure an even number of feet—12, 14, 16, etc. Care should be taken to obtain an average diameter at the top end, and, in sound logs, measure to the nearest inch. It is customary however to drop to the inch below, that is if a diameter measures 16.7 inches call it 16 inches. But it is more exact in sound logs of any size to raise than to lower.

To scale logs, then, by the Maine Rule, measure the diameters at the top end inside the bark, and the lengths, and obtain the board foot contents from the rule given below. Example: A log measures 16 inches diameter, and 16 feet long. Refer to the rule and look down the left hand column headed "Length in Feet" to the figure 16. Then across to the column headed "16," under "Diameter in Inches." The board foot scale in this case reads 179 b. f.—which is the scale of the log.

If there is rot in the log deduction must be made. The worst form of rot is center or heart rot, which appears in the end of the log. Deduct for this form of rot as follows:

Measure the average diameter of the rot. Add to this figure $\frac{1}{3}$ of itself if 12 inches or less, and $\frac{1}{4}$ if from 13 to 20 inches. Find the scale of a log the size of the resulting figure and length of the whole log, and deduct this from the full scale of the log. For example: If in the log above there is rot appearing in both ends, the largest average diameter of which is 6 inches add $\frac{1}{3}$, or 2, to six, making 8. Find the scale of a log 8 inches diameter and 16 feet long—44 board feet. Deduct 44 from 179 and we have for the sound scale of the log 135 board feet.

Crooks, lightning scars, cat faces, and other forms of defects must be deducted according to the proportion of the log affected by them. Allowance should always be made for the slab in deducting for side defects, as much, and sometimes all, of the defect will come out in slabbing and should not be deducted from the scale.

The Maine Rule will underscale long logs. Logs over 24 feet in length should be scaled as two, taking one diameter at its middle. The Maine Rule is given below.

MAINE, OR HOLLAND, LOG RULE.

Length in feet	Diameter in Inches.																		23	24
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
10	12	19	27	32	36	42	51	65	75	89	101	111	128	145	169	189	210	227	250	274
11	14	21	30	33	39	51	62	78	90	98	111	123	142	160	187	209	232	252	274	298
12	15	23	33	36	43	55	67	83	98	115	121	134	154	174	203	227	252	272	300	327
13	17	25	36	43	59	72	92	105	124	141	157	179	189	220	246	273	295	326	357	384
14	18	27	39	46	64	78	98	113	133	151	168	192	218	254	284	318	351	384	412	439
15	19	29	41	49	64	78	98	105	120	142	161	179	205	232	271	302	336	363	401	439
16	20	31	44	52	68	83	105	120	142	161	179	205	232	271	302	336	363	401	439	439
17	22	33	47	56	72	88	111	128	151	171	190	218	247	288	321	357	386	426	466	494
18	23	35	50	59	76	93	118	135	160	181	201	231	261	305	340	378	408	451	494	521
19	24	37	52	62	81	98	124	143	169	192	212	243	276	322	359	399	431	476	514	549
20	25	39	55	65	85	103	131	150	178	202	223	256	290	339	378	420	454	501	549	576
21	27	41	58	69	89	109	137	158	186	212	235	269	305	356	397	441	476	526	576	576
22	28	43	61	72	94	114	144	165	195	222	246	282	319	373	415	462	499	551	604	631
23	29	45	63	75	98	119	150	173	204	232	257	295	334	390	435	483	522	575	631	631
24	30	47	66	78	102	124	157	180	213	242	268	307	348	407	454	504	545	601	659	686
25	32	49	69	82	106	129	164	188	222	252	279	320	363	424	473	525	567	626	686	713
26	33	50	72	85	111	134	170	195	231	262	291	333	378	441	491	545	590	651	714	741
27	34	52	74	88	115	140	177	203	240	272	302	346	392	458	510	566	613	676	741	768
28	36	54	76	92	119	145	183	210	249	282	313	359	407	475	529	587	635	691	726	796
29	37	56	79	95	123	150	190	218	258	292	324	371	421	492	548	608	658	726	796	823
30	38	58	82	98	128	155	196	225	266	302	335	384	436	509	567	629	681	751	796	823

STANDARD MEASURE—BLODGETT RULE.

The Blodgett, or New Hampshire, Rule gives the contents of logs in terms of a standard bolt 16 inches in diameter and one foot long. The diameter should be measured at the middle point of the log and the length taken. The number of Blodgett feet may then be found by dividing the square of the diameter by 256, and multiplying by the length of the log. Thus a log 16 inches in diameter at the middle, and 16 feet long scales 16 Blodgett feet.

CUBIC FOOT MEASURE.

The best practicable method of finding the cubic foot contents of a log is to use calipers graduated on the beam to show the cubic contents of logs of different lengths and diameters at the middle point. In which case the solid scale may be read direct as from a scale stick.

A cubic foot scale may be made as follows: Multiply the square of the diameter of the log at its middle by 3.1416, and divide by 4. To convert to square feet divide by 144. Then multiply by the length of the log.

A cord of wood rarely contains more than 110 actual cubic feet or less than 70 cubic feet. Hardwood cut in four foot lengths will seldom run more than 85 cubic feet of solid wood to the cord of 128 cubic feet. Softwood will run about 95 cubic feet.

CHARACTERISTICS OF TREES RECOMMENDED FOR PLANTING IN MAINE.

COMMON NAME	SCIENTIFIC NAME	AVERAGE HEIGHT FEET	GROWTH	SHAPE OF CROWN
Arbor Vitae (White Cedar)†	<i>Thuja Occidentalis</i> ...	50	Rapid...	Conical
Ash—White	<i>Fraxinus Americana</i> ...	100	Medium...	Oval
Basswood (Linden)	<i>Tilia Americana</i> ...	60	Rather Rapid...	Round Top
Birch—white (paper or canoe)	<i>Betula Papyrifera</i> ...	60	Medium	Round Top
Elm—American	<i>Ulmus Americana</i> ...	100	Rapid...	Vase
Elm—white	<i>Ulmus Montana</i> ...	75	Rapid...	Oblong
Fir—Wych†	<i>Abies Concolor</i> ...	125	Vigorous	Conical
Fir—Nordman's*†	<i>Abies Normanniana</i> ...	100	Rapid	Conical
Hemlock	<i>Tsuga Canadensis</i> ...	60	Slow	Conical
Hickory—shagbark	<i>Carya ovata</i> ...	80	Slow	Conical
Larch (Hackmatack)†	<i>Larix Laricina</i> ...	60	Rapid	Conical
Larch—European*†	<i>Larix Paeoniae</i> ...	60	Rapid	Open—conical
Maple—Norway	<i>Acer Platanoides</i> ...	60	Rapid	Round
Maple—Silver	<i>Acer Saccharinum</i> ...	90	Slow	Irregular
Maple—sugar (Rook)	<i>Acer Saccharum</i> ...	70	Medium	Round
Oak—pin	<i>Quercus Palustris</i> ...	70	Rapid	Conical
Oak—red	<i>Quercus Rubra</i> ...	80	Slow	Narrow round
Oak—white	<i>Quercus Alba</i> ...	70	Rapid	Round
Pine—Austrian*†	<i>Pinus Austriae</i> ...	75	Rapid	Compact round
Pine—Scotch*†	<i>Pinus Sylvestris</i> ...	100	Rapid	Rather strangely
Pine—white†	<i>Pinus strobus</i> ...	80	Fairly rapid	Broad—flat
Spruce—Colorado Blue†	<i>Picea Pungens</i> ...	75	Fairly rapid	Pyramidal
Spruce—Norway*†	<i>Picea Abies</i> ...	70	Fairly rapid	Conical
Spruce—white†	<i>Picea Canadensis</i> ...	130	Rapid	Pyramidal
Sycamore	<i>Platanus Occidentalis</i> ...			Irregular

* Not native species. † Not suitable for street trees, better on lawns or in groups. None of the trees listed here mature at less than 100 years; and many of them live for 500 years or more.

CHARACTERISTICS OF TREES—Continued.

COMMON NAME	TOLERANCE OF SHADE OR CROWDING	AUTUMN COLORING	LIABILITY TO DAMAGE	
			FREE FROM INSECTS	FREE FROM FUNGI
Arbor Vitae (White Cedar)	Tolerant	Evergreen	Free from insects	Free from fungi
Ash—White	Intolerant	Brown	Some insect danger	Some leaf insects
Basswood (Linden)	Rather tolerant	Yellow	Leaf insect	Leaf insect
Birch—white (paper or canoe)	Rather tolerant	Brown	Free from insects	Free from insects
Elm—American	Rather intolerant	Brown	Very free	Very free
Elm—Wych *	Rather intolerant	Brown	Very little	Very little
Fir—white	Tolerant	Evergreen	Insect danger	Insect danger
Fir—Normman's *†	Tolerant	Evergreen	Insect danger	Insect danger
Hemlock	Intolerant	Yellow	Very little	Very little
Hickory—shagbark	Intolerant	Yellow	Some insect and fungi	Some insect and fungi
Larch (Hackmatack) †	Intolerant	Yellow	Some insect and fungi	Some insect and fungi
Larch—European *†	Tolerant	Yellow	Some insect and fungi	Some insect and fungi
Maple—Norway	Rather tolerant	Scarlet	Free	Free
Maple—Silver	Quite tolerant	Crimson	Free	Free
Maple—sugar (Rock)	Fairly tolerant	Scarlet	Slight	Slight
Oak—pin	Rather tolerant	Red	Little	Little
Oak—red	Rather intolerant	Evergreen	Very little	Very little
Oak—white	Tolerant	Evergreen	Very little	Very little
Pine—Austrian *†	Fairly tolerant	Brown	Insects and fungi	Insects and fungi
Pine—Scotch *†	Fairly tolerant	Evergreen	Free	Free
Pine—white †	Tolerant	Evergreen	Free	Free
spruce—Colorado Blue †	Tolerant	Evergreen	Free	Free
spruce—Norway *	Tolerant	Evergreen	Free	Free
spruce—white †	Very intolerant	Evergreen	Free	Free
Sycamore				

* Not native species. † Not suitable for street trees, better on lawns or in groups.

None of the trees listed here mature at less than 100 years, and many of them live for 300 years or more.

CHARACTERISTICS OF TREES—Concluded.

COMMON NAME	Size of growing space required	Ease of transplanting	Special Features
Arbor Vitae (White Cedar)†	Small	Easy	Will stand heavy trimming
Ash—white.	Medium	Easy	Graceful and valuable
Basswood (Linden)	Medium	Easy	Flowers and fine form in winter
Birch—white (paper or canoe)	Medium	Not easy	Best on lawns or with evergreen background
Elm—American	Large	Easy	Fine form summer and winter
Elm—Wych *	Medium	Easy	Luxuriant, glossy foliage—spreading form
Fir—white†	Large	Easy	Most vigorous and longest lived of firs
Fir—Nordman's*†	Large	Easy	Retains fine form well; very frost hardy
Hemlock	Medium	Easy	Will stand crowding well
Hickory—shagbark	Medium	Not easy	Eligible fruit; exfoliating bark
Larch (Hackmatack)†	Medium	Easy	Only coniferous genera, shedding leaves in fall
Larch—European*†	Medium	Easy	Will grow on poor soil and rocky sites
Maple—Norway	Medium	Easy	Best maple for street planting
Maple—Silver	Medium	Rather easy	Rapid growth, but brittle
Maple—sugar (Rock)	Large	Easy	Good form and shade
Oak—pin	Medium	Fair	Pleasing form
Oak—red	Large	Fair	Pleasing form and foliage
Oak—white	Medium	Easy	Hardiness and long life
Pine—Austrian*†	Medium	Easy	Dark blue-green dense foliage—rather stiff form
Pine—Scotch*†	Medium	Easy	Pleasing form, light textured foliage
Pine—white†	Large	Fairly easy	Bluish-green foliage.
Spruce—Colorado Blue†	Medium	Easy	Fine for lawns or wind-breaks
Spruce—Norway†*	Medium	Easy	Hardy and pleasing form
Spruce—white†	Large	Easy	Splotchy bark, massive size
Sycamore			

* Not native species. † Not suitable for street trees, better on lawns or in groups.
None of the trees listed here mature at less than 100 years; and many of them live for 500 years or more.



Planting the seed in the seedbed by broadcast method, Forest Nursery, University of Maine.

SHRUBS HARDY IN MAINE.

	Color of flowers	Other striking features	Height feet	Best use in
Japanese barberry— <i>Berberis thunbergi</i>	Yellow.....	Red fruit and foliage.....	3	Hedge, mass
Common barberry— <i>Berberis vulgaris</i>	Yellow.....	Loose clusters, red berries.....	5	Mass
Siberian dogwood— <i>Cornus alba</i> var. <i>sibirica</i>	Cream.....	Red twigs, blue fruit.....	7	Mass
Red Osier dogwood— <i>Cornus stolonifera</i>	White.....	Prostrate, red bark.....	6	Mass near water
Japanese quince— <i>Cydonia japonica</i>	White.....	Flowers in masses, foliage dark.....	5	Hedge, mass
Strawberry tree— <i>Erythronium Sibollians</i>	Yellow-red.....	Scarlet berries.....	8	Border, single
Golden bell— <i>Forsythia intermedia</i>	Yellow.....	Earliest flower.....	7	Single mass
Hills of Snow— <i>Hydrangea arborescens</i>	White.....	Covered with flowers.....	4	Mass
Hydrangea— <i>Hydrangea paniculata grandiflora</i>	White.....	Cone-shaped, large flowers.....	7	Single, hedge, mass
Japanese privet— <i>Ligustrum ibota</i>	White.....	Dense, almost evergreen.....	5	Hedge
Morrow's honeysuckle— <i>Lonicera Morrowi</i>	White.....	Dense, hardy red fruit.....	6	Single, mass
Tartarian honeysuckle— <i>Lonicera tartarica</i>	White, pink.....	Fragrant flowers.....	7	Single, mass
Mock orange— <i>Philadelphus coronarius</i>	White.....	Sweet scented, large flowers.....	8	Border
Ninebark— <i>Physocarpus opulifolius</i>	White.....	Quick growing.....	10	Mass
Smoke bush— <i>Rhus cotinus</i>	Yellow.....	Plumose flowers.....	10	Single
Staghorn sumac— <i>Rhus typhina</i>	Greenish-white.....	Coarse red fruits, fall foliage.....	15	Mass
Flowering currant— <i>Ribes aureum</i>	Yellow.....	Open, glossy foliage.....	6	Border
Elder— <i>Sambucus canadensis</i>	White.....	Pyramidal, red fruit.....	6	Mixed border
Bridal wreath stirea— <i>Streva Van Houttei</i>	White.....	Flowers on arching branches.....	6	Mass
Snowberry— <i>Symplocos racemosa</i>	Pink.....	Waxy berries, white.....	5	Mass
Chinese lilac— <i>Syringa chinensis</i>	Red-purple.....	Fragrant flowers.....	6-8	Single, mass
Common lilac— <i>Syringa vulgaris</i>	Purple.....	Fragrant flowers.....	8-10	Mass
Arrow-wood— <i>Viburnum dentatum</i>	White.....	Black fruit in fall.....	6-8	Mass
Snowball— <i>Viburnum cassinoides</i> (Japanese).....	White.....	Finest of snow-balls.....	8	Single, mass
High bush cranberry— <i>Viburnum opulus</i>	White.....	Protus of flowers.....	6-8	Mass

COMMERCIAL NURSERIES.

Any of the following will be glad to quote prices and to furnish further information in regard to planting stock, on request:

NURSERIES IN MAINE.

<i>Name</i>	<i>Address.</i>
Casco Bay Nursery Co.,	Yarmouth
Homer N. Chase & Co.,	Auburn
Hancock Nursery Company,	Surry
H. A. Jackson,	Portland
George L. Mahoney & Co.,	Saco
Mitchell & Company,	Waterville
Mt. Desert Nursery,	Bar Harbor
E. W. Wooster,	Ellsworth

SOME OTHER NURSERIES IN THE EAST.

Keene Forestry Company,	Keene, N. H.
H. F. Horseford,	Charlotte, Vt.

NURSERIES IN MASSACHUSETTS.

American Forestry Company,	Boston, Mass.
Bay State Nurseries,	No. Abington & Rockland, Mass.
Eastern Nurseries,	Holliston, Mass.
New England Nurseries,	Bedford, Mass.
Old Colony Nurseries,	Plymouth, Mass.
West Side Nurseries,	Worcester, Mass.
W. B. Whittier Nursery Co.,	South Framingham, Mass.

NURSERIES IN RHODE ISLAND.

Home Nurseries,	Norwood, R. I.
Newport Nursery Co.,	Newport, R. I.

NURSERIES IN CONNECTICUT.

Elm City Nursery Co.,	New Haven, Conn.
Fernwood Nursery,	Stamford, Conn.
New Haven Nursery Co.,	New Haven, Conn.
North Eastern Forestry Co.,	Cheshire, Conn.

NURSERIES IN NEW YORK.

Brown Brothers,	Rochester, N. Y.
Chase Nurseries,	Geneva, N. Y.
Ellwanger & Barry,	Rochester, N. Y.
Hicks & Son,	Westbury, N. Y.
Jackson & Perkins,	Newark, N. Y.
Rice Brothers,	Geneva, N. Y.
W. & T. Smith Co.,	Geneva, N. Y.

NOTE. This list makes no pretensions to being complete. It is given solely for information of prospective customers, and carries with it no recommendation or official approval. The order of listing is alphabetical, in each State.

WHITE PINE BLISTER RUST.

In my recommendations, I have urged the incoming Legislature to provide means whereby a systematic fight may be waged against this extremely dangerous enemy of our white pine.

Although this may properly come under the jurisdiction of the Commissioner of Agriculture through the Bureau of Horticulture, yet the extermination of this disease is of such vital importance to this Department that I am taking the liberty of going into this matter in detail as a form of information to those interested.

The Interstate Committee for the Suppression of the Pine Blister Rust, with headquarters at Boston, was formed and is made up of State Foresters, Horticulturists, Nurserymen and Lumbermen. This Committee, of which I have the pleasure of being a member, has rendered valuable service, thus far, in the dissemination of information on the disease and in securing Federal appropriations and assisting in the work of securing State appropriations.

Maine has done nothing yet in the way of starting any pre-arranged preventative measures against the Rust for the want of legal authority and necessary appropriations. Thus, I earnestly hope that the incoming Legislature may deliberate on this subject and take such measures as seem necessary.

For a general history and description of this disease, I shall submit a Press Bulletin issued by the above named Committee in the early part of 1916.

A SERIOUS DANGER TO ALL OF THE FIVE-LEAVED PINES OF THE UNITED STATES.

"The white pine blister rust is a fungus disease, native to Europe, and according to eminent authorities, it has rendered the growing of our native white pine in England, Denmark, Holland and parts of Germany impracticable. The disease was imported to this country on nursery stock of white pine, and plantations made from such stock in the states of New York,

Pennsylvania, New Hampshire, Vermont, Massachusetts and Connecticut have been found to be infected with this disease. Plantations in other states are under suspicion.

Unlike the chestnut blight, the blister rust cannot spread directly from one pine to another pine. It has two hosts; one stage of the disease lives in the bark of five-leaved pines, the other develops on the leaves of currant and gooseberry bushes, both the wild and the domestic species. The stage of the disease on currants and gooseberries can spread to other currants and gooseberries, and also to pines. There is but one stage of the disease on the pines, and this can spread only back to currants and gooseberries. Therefore the disease has a vulnerable point of attack; namely, the complete elimination of one or the other of the hosts in the sections where the disease is found. The pine forests, as a whole, are infinitely more valuable than the currants and gooseberries; therefore, the latter are the ones to be destroyed in the sections where the disease has been found. Where the disease has been located, the safe thing to do is to destroy all currants and gooseberries in the immediate vicinity, whether or not they are infected, as well as all pines that are infected.

The total distance that the disease will spread in one season is not, and probably cannot be definitely determined, but one point is certain, namely, that *it will surely spread in this country, wherever pines and currants or gooseberries are found in the same vicinity.* Wild currants and gooseberries are found practically all over the country, which makes the spread certain, unless drastic measures are taken to prevent it. The maximum distance that the disease will carry from currants and gooseberries to pines, and vice versa, has not been definitely proved, but certainly that distance is several hundred yards.

The disease is known to attack the white pine (*Pinus strobus*), the Pacific Coast sugar pine (*Pinus lambertiana*), and the white pine of the northern Rocky Mountain region (*Pinus monticola*). There are six other five-leaved pines which are believed to be susceptible. The value of the pines that will certainly be attacked in the United States is estimated by our foresters to be over \$425,000,000.

Unless adequate steps are taken against this disease at once, the future value of the young second growth white pine will be

destroyed. It is known that the disease has killed trees up to sixteen years of age in this country and up to thirty years in Europe. Trees of any age are liable to be attacked, which means the ultimate commercial extinction of the five-leaved pines, unless the rust is suppressed.

However, foresters and pathologists are generally agreed that if adequate steps are at once taken against this disease, the planting of white pine need not be discontinued. It is of course the most valuable timber tree in the middle northern and northeastern states.

Now is the time for the state and federal governments to act. Nothing short of the most prompt and thorough measures with full cooperation will suffice. A few thousand dollars spent now will do more good than hundreds of thousands after the disease has secured a permanent foothold. Once it is thoroughly established, no amount of money will save the five-leaved pines where currants or gooseberries are associated with them. A vigorous and continuing effort now should completely eradicate the disease; at the least, it will so reduce its spread, as to make its control possible at a minimum cost. There was a time when the gipsy and brown-tail moths could have been exterminated, had the proper measures been applied. That opportunity was neglected with the result that, despite the subsequent expenditure of millions of dollars, we shall probably *never be rid of those pests*. The chestnut blight was neglected until it became so widely scattered that control was impossible, and all of our chestnut trees are doomed, which means the loss of millions of dollars. This was due to sheer neglect. Are we to lose our pines and pine-using industries in the same way?

The Federal Government will be asked to make an appropriation of \$50,000 for this work this year. This is the minimum amount with which the task of suppression can be undertaken. The individual states will also be asked to do their share. Massachusetts, alone, has requested its legislature for an appropriation of \$10,000 to meet this emergency. With so many states already affected, the problem is a national one, and every one who is interested in saving the white and other five-leaved pines should at once request his senator and representative in Washington to secure this appropriation. He should also see that the proper authorities in his own state are given the money

and power to cooperate to the fullest extent with the Federal authorities in the work of suppression."

PRESS BULLETIN.

On April 15, 1916, the following bulletin was given to the press of the State. No cases were reported on the strength of this but that the disease had already entered Maine is evidenced by the report of the Federal Agent, Mr. G. B. Posey, which is made a part of this article.

*To all owners of timber lands in the State of Maine
and all interested in forest growth:*

The State Forestry Department takes this means of notifying all who are interested in forest growth that there is great danger from a disease known as the white pine blister rust. This disease which attacks our white pine trees is already very prevalent in our sister state of Massachusetts, and Congress, realizing the gravity of the situation, has already taken action in the form of an appropriation to combat this disease.

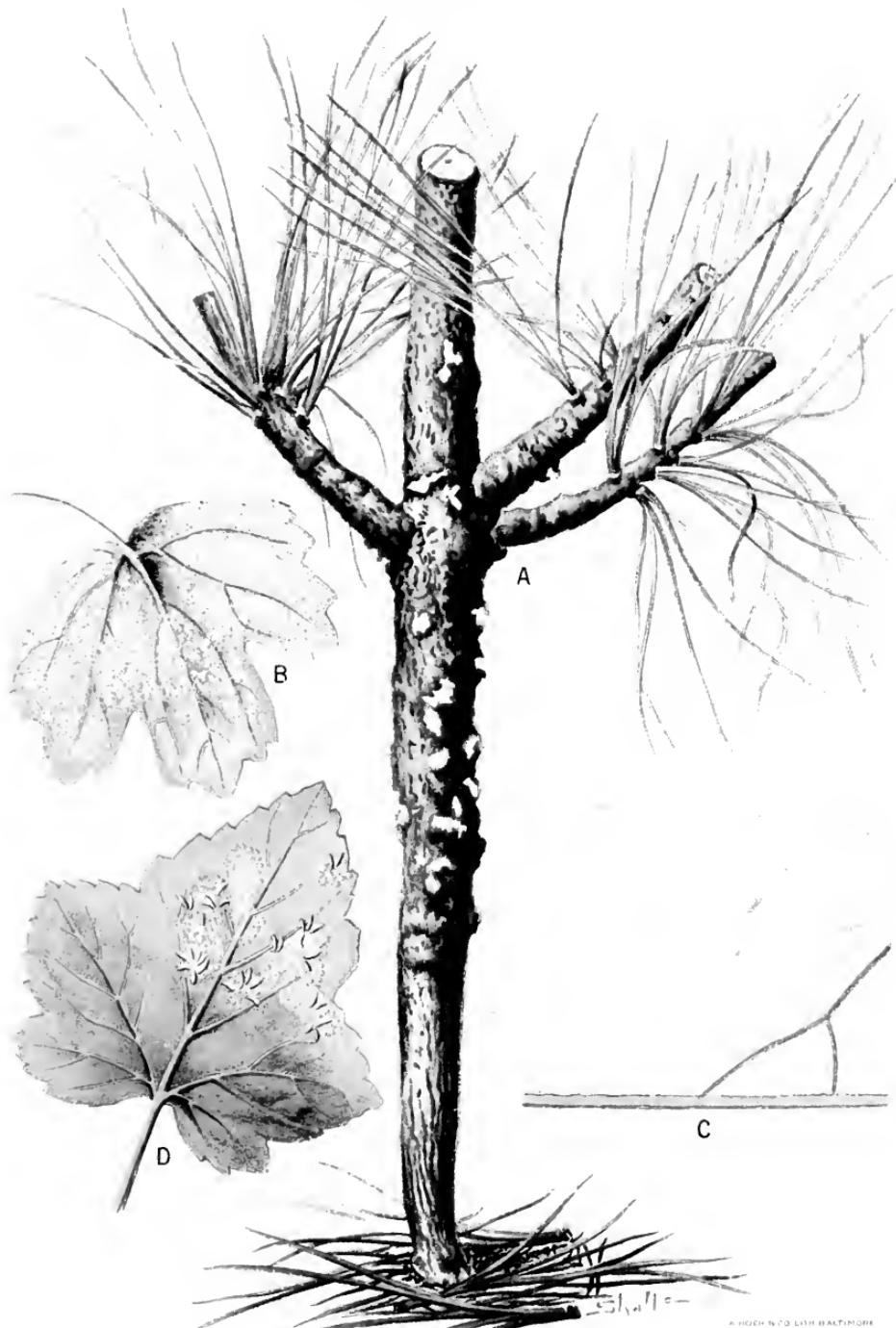
The Department has not yet ascertained whether or not this disease has reached our forests, and would ask for the cooperation of all parties interested, that if they discover anything that may lead them to believe that this disease has actually reached our state, to notify the Department at Augusta promptly. In this way the Department can keep in touch with the situation, and take such steps as may be found necessary to wage a fight against the disease.

FURTHER INFORMATION AS TO LIFE OF WHITE PINE BLISTER RUST AND TREATMENT OF SAME.

Massachusetts was one of the very first States to realize the gravity of this situation and to take steps to combat the Blister Rust. I submit an excellent treatise on this disease by H. T. Fernald, State Nursery Inspector of Massachusetts.

"The pine blister rust is a plant, living as a parasite in pines for a part of the time and in currants and gooseberries for the remainder. A seed (spore), which is carried by the wind, perhaps, from a diseased currant bush in the fall to the bark of a pine, sprouts there and sends its roots through the inner bark of the tree in that region, and this growth of the roots of the disease may continue for several years. The bark in this region often becomes much thicker than elsewhere as a result, or it may die, killing the tree before the disease shows on the surface of the bark. Sooner or later, however, if the tree does not die first, the rust grows out through the bark, and in the spring forms masses of yellow seeds there, covered at first by a whitish covering which soon breaks, and the seeds are blown about. If any of them are blown on to currant or gooseberry leaves, these seeds sprout and the roots grow all through the leaves for a short time. After about two weeks these roots grow out to the surface, and there produce seeds which can be blown by the wind and which can produce the disease in other currant or gooseberry leaves in the same way. This process usually occurs about three times during the summer, but as fall comes on the last set of seeds produced is different, for these cannot spread the disease farther on currants, but only on pines. The seed produced by the disease in the pines cannot produce it in other pines, but only in currants and gooseberries, while the first sets of seeds formed in these cannot start the disease in pines, only the fall-formed seeds being able to grow in pines.

Explanation of Plate I.—A, A diseased white-pine tree with the blisters broken open, spreading the disease to any currants or gooseberries that may be in the vicinity; *B*, early summer stage on the lower surface of a currant leaf, repeating on currant leaves during the rest of the season, a new crop of spores appearing every two weeks; *C*, early summer stage much magnified; *D*, late summer and fall stage on the lower surface of a currant leaf, spreading the disease back to neighboring white pines. (Farmers' Bulletin, No. 742, U. S. Dept. of Agriculture.)



CRONARTIUM RIBICOLA ON *PINUS STROBOS* AND *RIBES*.
(WHITE-PINE BLISTER RUST.)

A. HOCH & CO. LITH. BALTIMORE

TREATMENT.

The treatment, therefore, is to destroy all pines having the disease as fast as it shows itself on them, and to keep all currants and gooseberries so far away from pines that the disease cannot carry from one to the other in either direction. The distance apart to insure this is not positively known, but it is believed that one-third of a mile or 500 yards should be sufficient.

To find the disease, look on the pines from the first of May till the end of June.

On the currants it shows from the middle of July till the leaves drop in the fall.

Currants free in July and August may catch the disease during the summer from others, and first show it in September. Black currants are attacked more generally than other kinds of currants or gooseberries."

WHITE PINE BLISTER RUST IN MAINE.

By G. B. POSEY, Agent U. S. Department of Agriculture,
Bureau of Plant Industry.

Scouting for white pine blister rust in the State of Maine was begun July 6, 1916, and continued until August 4, 1916. The work was taken up again August 19, 1916, and continued until October 15, 1916. During the time spent scouting in Maine practically the entire white pine area of the State was visited. White pines probably occur in all sections of Maine. The area in which white pine growth is practically unbroken is thought to be included in the following boundary: York Co., Cumberland Co., Southern portion Oxford Co., Androscoggin Co., Sagadahoc Co., Kennebec Co., Lincoln Co., Knox Co. Southern Penobscot and Hancock and S. W. Washington Co.

Gooseberries and currants were found in all places visited. In farming sections and vicinities of towns and cities cultivated plants were found frequently. Several instances were noted where they were grown commercially, but usually they were found as a few plants growing in gardens or yards. Wild plants were found in practically all localities. They grow along road sides, stone walls, ravines, in pastures, thick forests, cut over forest tracts, rocky hills, etc. In the Southern part of the state, especially in York Co., these plants were not found in large numbers except in low swampy lands. From Cornish N. and N. W., currants and gooseberries appear to grow wild abundantly in practically all localities and under very variable conditions as regarding contour and humidity. In many places they were found to cover nearly the entire ground surface.

The area in which gooseberries and currants have been found infected with white pine blister rust extends from Kittery Point north to Rangeley, from there northwest to Millinocket, and from Millinocket south to Bar Harbor. Many thousand plants were examined during the course of the time spent scouting in Maine. A larger number were found apparently

free of the disease than were found to be infected. The wild plants are often found growing in thick mats over the forest floor. In some cases they all appeared to be infected, while in other cases, having practically identical environmental conditions, only a very small per cent of them would show the disease. A single infected plant has often been found in the center of thick growths of plants which did not show the disease. Healthy plants are often found in moist shaded places while the plants of the same species growing in a pasture, field, or dry roadside would be heavily infected. The reverse of this statement is found to be true also.

Since plants growing under many different sets of field conditions have apparently shown that the attacks of the disease does not follow, exclusively, any set of conditions, it appears to me that the climate in Maine is favorable most anywhere for the development of the disease on gooseberries and currants.

Infected pines were found at Bar Harbor, Lewiston, Bath, Riverton Park and Kittery. Many of the infections were on young trees, some of which had already been killed, others were dying from the disease, while others were only attacked on small branches. At Riverton Park and Kittery many large trees showed the disease on lateral and terminal branches. Some of these branches were just dead, others had been dead for some time, while others were turning yellow at the ends (foliage).

G. B. POSEY,

Agent.

Locations of Blister Rust Infections on Ribes in Maine

YORK COUNTY.

KITTERY.

Wild white currants in Geo. A. Moore's place, stone wall along fence.

Flowering currants in Geo. W. Newson's yard.

KITTERY POINT.

Wild Gooseberries growing along road side on S. W. side of Gerrish's Island.

Red currants in John H. Call's garden, first house after crossing bridge going over to Cutt Island.

Flowering currant in yard of first house on right after crossing bridge coming from Cutt's Island.

Red currants in garden of Geo. H. Wilson, R. F. D., on road from Cutt's Island to York Harbor.

Wild gooseberries along roadside just after crossing R. R. track second time going from Cutt's Island to York Harbor.

YORK CORNER.

Wild gooseberries along roadside 1-2 mile south of York Corner.

Wild red or white currants along roadside, state road, about half way between York Corner and Kittery.

Flowering currants—Geo. A. Pierce, first house on right after crossing "Spruce Creek" on state road going from York Corner to Kittery.

YORK VILLAGE.

Wild Black Currants growing along stone fence just north of point where York Corner and York Village roads converge to road to Cape Neddick.

ELIOT.

Red currants in garden of Eleanor M. Spinney, "Pine Hill Cottage."

Wild red currants along stone wall about half way between Kittery and Eliot.

Wild red currant 1-3 mile towards Kittery from point where road crosses creek bridge at Eliot.

Wild gooseberry 1-2 mile beyond creek bridge at Eliot, going toward South Berwick.

SOUTH BERWICK.

Wild red currants along stone wall at "Genl. Goodwin House, 1717" about 1 1-2 mile south of South Berwick.

Black currants in yard of deserted house on witch-trot road at point where road from So. Berwick curves and goes to Conway Junction.

CONWAY JUNCTION.

Wild white currants and wild gooseberries along damp roadside 1 1-4 mile S. E. of Conway Junction on road to York Corner.

PAYNETON.

Wild Black Currants 1-2 mile S. E. of Payneton on road to York Corner.

MT. AGAMENTICUS.

Skunk currants in wooded swamp on mountain side near Mr. E. Plasted's house on new road across mountain.

BERWICK.

Wild gooseberries along roadside of road from Berwick to North Berwick, 1 mile from Berwick.

Wild Gooseberries at point where river road crosses Little River between Berwick and So. Lebanon.

WELLS CORNER.

White currants, red currants, cultivated wild gooseberries, black currants in garden of Mrs. William Hubbard, on Mer-

riland Ridge, 3 miles from Wells Corner on road from No. Berwick to Wells Corner.

Wild gooseberries along roadside in Wells Corner.

OGUNQUIT.

Wild gooseberries along roadside at Ogunquit. (State Road).

Wild Goosberries on roadside of rough road half way from Ogunquit to No Berwick.

NORTH BERWICK.

Wild gooseberries in pine swamp 2 1-2 miles S. E. of No. Berwick.

Wild gooseberries along roadside several miles from No. Berwick on road to Lebanon.

LEBANON.

Black currants along fence between R. F. D. Boxes 26 and 27 in Lebanon.

Skunk currants in low swamp along roadside 1-2 mile from store in Lebanon on road to East Rochester.

SOUTH LEBANON.

Wild Gooseberry along roadside 1-2 mile from center of Village on road to Lebanon.

SANFORD.

Wild red or white currants along roadside 2 miles south of Sanford on road that runs along west side of Bauneg Beg pond.

Red currants in garden of H. C. Derbey on Mt. Hope road three miles from Sanford town.

Red currants in garden of Owen Goodwin in "Deering Neighborhood" 3 1-2 miles of his road to Emery Mills.

SOUTH SANFORD.

Red currants, cultivated; gooseberries, cultivated; W. H. Tibbetts, Oak Hill, on east side of Bauneg Beg pond.

WELLS DEPOT.

Red currants in garden of second house on right after crossing R. R. track at bridge going towards Wells Brook.

EAST LEBANON.

Red currants in garden of J. S. P. Jones in village near R. R. station.

NORTH LEBANON.

Wild gooseberries along roadside 3 1-2 miles from No. Lebanon on road to Milton Mills.

SPRINGVALE.

Wild red currants along roadside 1-2 mile beyond Springvale on road to Acton Corner.

Skunk currants in low swamp 300 yards N. W. of R. R. Station.

ACTON CORNER.

Red currants in garden of Clarence A. Butler, 1 1-2 to 2 miles from Acton Corner on road to Springvale.

WEST NEWFIELD.

Skunk currants in low swamp near point where stream flowing from Balch pond crosses road between Acton Corner and West Newfield, 3 1-2 miles south of West Newfield.

NEWFIELD.

Red currants in well cared for orchard in the town.

WATERBORO.

Red currants in garden of Smith Bros. (Collected by H. H. Nash—Do not know exact locality.)

Red currants in garden of Oscar F. Day, 1-2 mile north of South Hollis R. R. crossing.

SACO.

Red currants, cultivated, in garden of Clarence Holt along Main street.

Red currants, cultivated, and black currants in garden of Mr. Wilson, 7 1-2 miles S. of Portland on State Road to Saco.

Black currants, cultivated, in garden about 2 miles N. W. Main street in Saco at point where road crossing Scottle Hill meets road from Portland at right angle.

Black currants, cultivated, in garden of Annie Libby, Heath Road, 6 miles from center of Saco.

BIDDEFORD.

Wild gooseberries along road side about 3 miles from Biddeford on road to South Hollis on East side of river.

HOLLIS.

Black currants, cultivated, in garden of James Tyler, on river road 2 miles S. of West Buxton.

BUXTON.

Skunk currants 1-2 mile N. W. of R. R. station in pine swamp.

LIMERICK.

Black currants, cultivated, in garden of L. T. Staples, Mills Corner, Limerick.

EAST PARSONSFIELD.

Black currants, wild, along roadside.

LIMINGTON.

Black currants, wild, along roadside from Limington to East Limington.

NEW GLOUCESTER.

Black currants in garden 1 mile along road running N. W. from P. O.

Black currants 1 1-4 miles South of P. O.

Wild gooseberries 1-2 mile N. W. of P. O.

KENNEBUNK.

Red currants collected by Nash.

RIVERTON PARK.

Wild gooseberries about 300 yds. from Riverton Park entrance.

OXFORD COUNTY.

PORTER.

Red currants, cultivated, in garden of Chas. Philbeck, 2 1-2 miles North of Kezar Falls.

NORTH DENMARK.

Wild gooseberries along roadside 1 mile S. on road to E. Brownfield.

EAST BROWNFIELD.

Red currants along roadside in East Brownfield village.

Skunk currants 3 1-2 miles South of E. Brownfield on road to Kezar Falls.

BROWNFIELD.

Skunk currants along fence on Mr. Blake's farm near Blake School.

Skunk currants along side of Tibbitts Mt. 2 miles north of Merrill's Corner.

FRYEBURG.

Red Currants, cultivated, in garden of Mrs. Wm. Bradley, in town.

STOW.

Red currants in garden of Marshall Smith on Union Hill School road 4-5 mile from North Fryeburg.

LOWELL.

Wild Gooseberry along roadside about 1-2 mile south of narrow bridge over Kezar Lake.

SWEDEN.

Red Currants on road over Black Mt. about opposite Pickett Hill.

WATERFORD.

Skunk currants on side of Boar Mt., west side.

SOUTH WATERFORD.

Black currants along stone stone wall 2 1-2 miles east of Bog pond.

OXFORD.

Black currants in town, 1-2 mile N. E.

NORWAY.

Wild gooseberries along roadside 1-2 mile south.

SOUTH PARIS.

Wild gooseberries and Skunk currant 1-2 mile east on road to Hebron; 1 mile east on road to Hebron; 2 miles east on road to Hebron; 3 miles east on road to Hebron; 4 miles east on road to Hebron; 5 miles east on road to Hebron.

HEBRON.

Wild gooseberries and skunk currant 1-2 mile south of Hebron along roadside.

WEST MINOT.

Wild gooseberry along roadside 1-2 mile south of West Minot.

LOCKE MILLS.

Red currant in garden along roadside about half way between Locke Mills and Bethel.

BETHEL.

Black currants along roadside about 2 miles west of Bethel.

WEST BETHEL.

Wild gooseberries along roadside about half way from Bethel to West Bethel.

GILEAD.

Skunk currant on rocky hills about 1-2 mile west of Gilead.

RUMFORD.

Wild gooseberry and skunk currant 2 miles west of Post Office on rocky hill country.

HOUGHTON.

Skunk currant along R. R. track about 100 yards north of R. R. station.

CUMBERLAND COUNTY.

BRIDGTON.

Black currant, cultivated, in yard 2 miles north of Bridgton on road to West Bridgton.

Red currants on road along Long Lake, 2 miles So. of Bridgton.

HARRISON.

Black currants, wild, along roadside at north end of Anomynons pond.

Skunk currant 1-2 mile S. E. of Harrison on top of hill.

Wild gooseberries in woods 2 miles south of Harrison.

NAPLES.

Red currants in garden of Chas. Wentworth, in town.

SEBAGO.

Red currants, cultivated, in garden of James Shaw on road across Peaked Hills.

Red currants farm of Howard Pooe, in town.

BRUNSWICK.

Wild gooseberries and skunk currants along roadside to Bath 3 miles from Brunswick.

SAGADAHOC COUNTY.

BATH.

Wild gooseberry and skunk currant along roadside and in woods along road from Brunswick.

ANDROSCOGGIN COUNTY.

POLAND.

Red currants along roadside 2 miles from W. Poland over Range ponds.

Wild gooseberries along roadside to Poland Springs from Range Hill.

AUBURN.

Red currants in garden of Wm. S. Sawyer.

MECHANIC FALLS.

Wild gooseberry along roadside 2 miles north of Mechanic Falls on road from West Minot.

Black currant west of town on road to Hodge Hill.

LEWISTON.

Red currants in garden of C. S. Bartlett, 2 miles towards Greene corner.

Black currants in garden opposite Davis estate, 2 miles towards So. Lewiston.

GREENE.

Red currants in garden of Geo. E. Parker, in town.

WALES.

Black currant, Rondoll E. Webster, Wales Corner.

SOUTH LEWISTON.

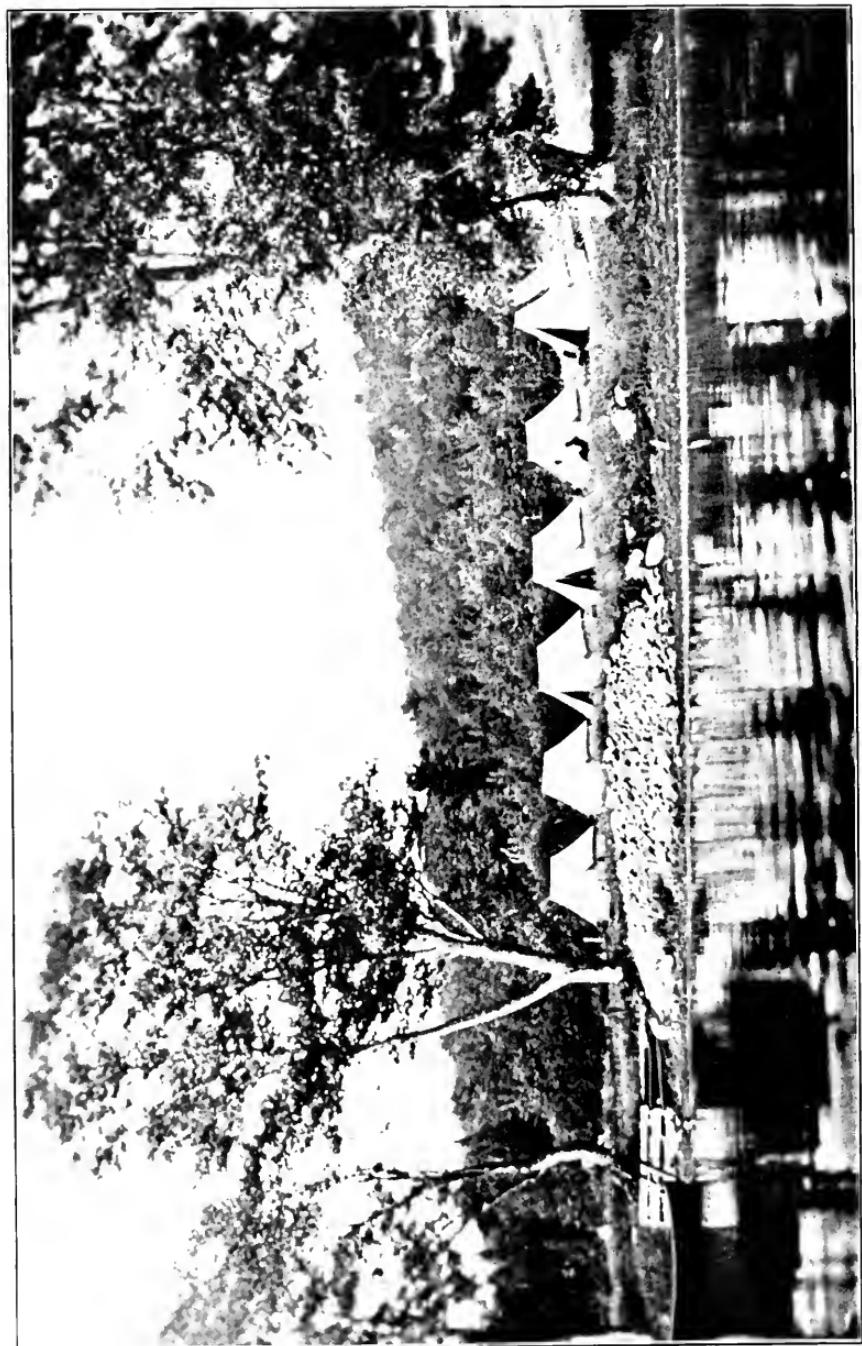
Black currants in garden in South Lewiston near road to Lisbon.

LISBON.

Black currants in garden in town.

LISBON FALLS.

Black currants in garden in town.



The Summer School Camp of the School of Forestry, University of Maine at Lunkasoo, Twp. 3, R. 7, Penobscot Co.

KENNEBEC COUNTY.

RANDOLPH.

Wild gooseberry and wild red currant in woods N. E. of bridge across river along R. R. track.

AUGUSTA.

Black currant, wild; wild gooseberry, skunk currant along roadside and in swamps west of Post Office, 3 miles out.

WATERVILLE.

Red currants, wild; wild gooseberries; black currants, wild, 2 1-2 to 4 miles N. W. of town in low woods.

SOMERSET COUNTY.

PITTSFIELD.

Wild black currants in swamp 3 or 4 miles N. W. of town.

PENOBCOT COUNTY.

CORINNA.

Cultivated gooseberries 2 miles east of village.

BANGOR.

Red currants 3 to 4 miles N. W. of Post Office.

MILLINOCKET.

Black currants in garden about 2 1-2 miles along road S. E. of town.

PISCATAQUIS COUNTY.

DOVER.

Wild gooseberry along roadside about one mile S. E. of town.

GREENVILLE.

Wild red currant in swamps just south of town.

FRANKLIN COUNTY.

RANGELEY.

Skunk currants along road to Strong, several miles South of Rangeley.

STRONG.

Wild red currants along roadside on road from Rangeley several miles from Strong.

LINCOLN COUNTY.

WISCASSET.

Wild gooseberry and skunk currant in woods 1-2 mile N. W. of R. R. Station.

WALDO COUNTY.

ISLESBORO.

Red currants in garden of L. E. Smith.

HANCOCK COUNTY.

ELLSWORTH.

Skunk currant in swamps about 4 miles north of village.

BAR HARBOR.

Black currant, cultivated; red currant, cultivated; white currant, cultivated; gooseberries, cultivated, in Mt. Desert nurseries.

KNOX COUNTY.

ROCKLAND.

Wild gooseberry in woods 3 miles N. W. of Rockland P. O.

VINAL HAVEN.

Skunk currant and wild gooseberry in woods toward North Haven.

LOCATIONS OF PINE INFECTIONS IN MAINE.

BAR HARBOR.

In Mt. Desert Nursery.

BATH.

In native pines along trolley and road between Bath and Brunswick about 2 to 3 miles from Bath.

LEWISTON.

In native pine of Davis Estate, 2 miles S. E. of Lewiston.

RIVERTON PARK.

In native pine in pine growth near Riverton Park entrance.

KITTERY POINT.

In native pine in pine woods on Kittery point just across stream where bridge leads to Cutt's Island.

CONCLUSIONS AND RECOMMENDATIONS.

In making the eleventh, and my second biennial report, I wish to express my appreciation to all those who have so cheerfully cooperated with me. Not only to the owners of timberlands but to those who love the forests of Maine and value them not only for their commercial value but also for the scenic beauty, and means of recreation and pleasure.

In making my first report I recommended some change in the existing laws and am pleased to report that most of my suggestions were enacted into law. The Legislature of 1913 passed a law authorizing the Governor and Council to advance to the Forest Commissioner from time to time, when his funds were exhausted, such amounts as he deemed sufficient to carry on the work of the Department.

Under this law, the Governor and Council, in November, 1914, advanced the sum of Ten Thousand Dollars to the Forest Commissioner, but under the ruling of the Attorney General I was obliged to pay back to the general fund of the treasury the sum thus advanced so if the law is thus construed and not remedied it would be of little benefit as one administration could mortgage the funds of an incoming administration. I should strongly advise that this law be amended.

Rapid strides have been made in protecting our forests from fire danger and have lessened from year to year the great loss from severe fires. Our lookouts have been carefully manned; good telephone communications have been established and a system of efficiency followed in selecting our wardens and deputy wardens.

I would earnestly recommend to the owners of timber lands and also members of the Legislature that all proper efforts should be used to continue the cooperation between the State and the Federal Government for the protection of our forests.

In the fall of 1915, it was my good fortune to visit some of the great forested States of the West and I found in comparing their methods and laws with those of our own State, that

Maine was true to her motto, "Dirigo—I lead." Our system of raising funds is better than in any other State, as no matter how well they prepare, they are often hampered by the lack of funds in the completion of their work as they depend on the annual or biennial appropriations which might vary from time to time. While in Maine our funds are fixed by law and if by good management or a fortunate fire season we have a balance, it accumulates for future use.

The danger and risk of fires from the railroads, which in former years were such a menace to our forests, has been minimized and am pleased to note that the officials have cooperated cheerfully and efficiently.

I still think, as in former years, that an extra tax of one mill should be assessed for one year on the timberlands in the Forestry District for an emergency fund, and I could safely guarantee that no timberland owners would ever be called on to pay any money outside of the Forestry tax for fire protection.

My attention has been called, within the past month, to a plan of some of the people in Maine who are interested in its forests, to present a bill to the next Legislature to abolish the offices of State Land Agent and Forest Commissioner, and in their stead to have the Governor appoint a Commission of Lands and Forests composed of three men, one to serve for three years, one for two years and one for one year thereafter. One to be appointed annually for a term of three years. They to appoint a business manager who will be virtually the Land Agent.

I most earnestly advise the incoming Legislature not to pass such a law. One of the arguments advanced is to take the office out of politics, I do not agree in this proposition as I think any Governor should have the privilege of selecting his own officials to cooperate with him. It has been my experience in the past, not only in this State but in other States, that when Commissions were formed, instead of one head, that the State has not gained anything in efficiency and the expense of the Department has always been increased. Under this plan a Commission would be appointed consisting of three men. If they did not receive an ample salary to enable them to give sufficient time to their duties, it would not be of much benefit

to the State. On the other hand if they received good salaries and then employed a Forester to perform the duties of the office, whatever salaries they might receive would be, in my opinion, almost an absolute waste to the State.

The Land Agent and Forest Commissioner at the present time has sole charge of lands owned by the State or held in trust by it. He also has supervision over the State Nursery at Orono and his authority is absolute as far as protection of the forests from the ravages of fire. He is also Chairman of the Forestry Department of the University of Maine and with the President of the University and State Superintendent of Schools exercise the functions and have all the authority that a Commission would have, as suggested. I cannot see where any benefit would arise from a Commission in regard to forest planting other than we have now. The State Nursery at Orono has used, at the present time, all funds appropriated for this purpose and I should recommend a more liberal appropriation by the next Legislature to carry on this great work. I would recommend a more liberal salary for the Land Agent with the duties of the office increasing from year to year. Also the creating of the office of Deputy Land Agent and investing the Land Agent with authority to employ men skilled in their profession to carry out and put in operation the reforms such as are suggested by the proponents of the Commission.

The merit system that now prevails in the appointment of lookout wardens should be sustained as every year of experience of a watchman on a lookout station makes him many times more valuable the next year.

Within the past year a disease or blight, called the White Pine Blister Rust has been found in different sections of our State, attacking both the currants and gooseberries, and the white pine. It is a question of the destruction of either the currants and gooseberries or the white pine. Of course there is no question in the minds of our people as to which is the most valuable.

There is some question as to the proper authorities to carry on this work and I earnestly recommend to the incoming Legislature that laws be enacted designating officials for the work and also appropriating sufficient funds to stamp out this disease.

In closing I wish to ask the aid of all the citizens of the State to do everything in their power to lessen the damage to our forests by fire. Maine is rapidly taking her place as the banner State for recreation and pleasure and many thousands annually come to our seashore resorts and our inland lakes, to hunt in our forests and fish in our waters. Let us all unite under one banner with this motto in our minds "Maine, now as always, the best State in the Union."

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